DOCUMENT RESUME

ED 339 852 CE 059 774

AUTHOR	Mageean, Pauline
TITLE	From Senior Secondary to TAFE: Curricular Implications for TAFE of Increased Retention to Year 12.
INSTITUTION	TAFE National Centre for Research and Development, Ltd., Leabrook (Australia).
REPORT NO	ISBN-0-86397-194-6
PUB DATE	91
NOTE	112p.
AVAILABLE FROM	TAFE National Centre for Research and Development, Attn: Sales, 252 Kensington Road, Leabrook, South Australia 5068, Australia.
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Academic Persistence; *Articulation (Education); College School Cooperation; Comparative Analysis; *Curriculum Development; Dropouts; Foreign Countries; *High School Graduates; Postsecondary Education; *School Holding Power; Secondary Education; Technical Education; *Vocational Education
IDENTIFIERS	*Australia; *TAFE (Australia)

ABSTRACT

A project examined the interface between schools and technical and further education (TAFE) in Australia and between schools and post-school vocational education in other countries. It focused on the effect of increased retention to year 12 on TAFE curricula. Information was gathered through a literature search, interviews with curriculum staff, and questionnaires sent to TAFE head teachers (252 of 422 responded) and state/territory senior curriculum officers (19 of 22 responded). Findings indicated that, although senior secondary retention rates were steadily growing across Australia, the number of academically more able students entering apprenticeships was not rising proportionally. Retention was related to socioeconomic background, type of school attended, location, and ethnicity. Senior secondary/TAFE linked courses increased the range of curriculum options for students and motivated some students in ways more traditional school subjects could not. Existing formal advanced standing arrangements between secondary education and TAFE were very limited. A key issue was the balance between a general education for the individual and vocational training for industry and the need for post-compulsory schooling relevant for all. Retention rates were only beginning to have an impact on TAFE curricula. In comparison with other countries, Australia's participation in post-compulsory education was still only in the average to low-average range. Recommendations are made for strategies to promote the importance of education and training to the community and for increased joint curriculum development. (Appendixes include 48 references, a comparison of TAFE and school business studies courses, questionnaires, and a report on schools/TAFE linked courses.) (YLB)

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FROM SENIOR SECONDARY TO TAFE:

CURRICULAR IMPLICATIONS FOR TAFE
OF INCREASED RETENTION TO YEAR 12

Pauline Mageean

ADELAIDE 1991

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A.C.N. 007 967 311

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ISBN: 0 86397 194 6 (hard copy)
TD/TNC: 27.01

Wordprocessing by: Wendy Holland

Published by:
TAFE National Centre for Research and Development Ltd
252 Kensington Road
Leabrook SA 5068
(Incorporated in South Australia)

Printed by A. Caudell, Government Printer, South Australia

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ACKNOWLEDGMENTS

The very helpful contributions of the following people are gratefully acknowledged:

Ms Anne Cameron
Department of Office Studies
ACT Institute of TAFE

Ms Sue Christophers
Acting Director
Training Development Division
State Training Board (Vic)

Mr Brian Kearns
Associate Director
Foundation Education Curriculum Design and Development
Bureau of Employment, Vocational and Further Education and Training (Qld)

Ms Pam Griffiths
Curriculum Management and Accreditation
TAFE Professional Support Services
Office of Tertiary Education (NT)

Mr Paul Gillespie
Curriculum
ACT Institute of TAFE (WA)

Mr Barry Lullfitz
Education Officer Curriculum
The Office of TAFE (WA)

Mr Gary Le Duff
Assistant Director, Curriculum Services
SA Department of Employment and TAFE

Mr Brian Turner
Manager
Department of Employment, Industrial Relations and Training (Tas)

Mr Doug Haworth
Acting Director (Studies)
NSW TAFE Commission

Ms Berwyn Clayton
Acting Head, Curriculum
ACT Institute of TAFE

Dr Gwenyth Ottrey
Education Officer
Curriculum Services
SA Department of Employment and TAFE

Ms Pamela Dunlop
Acting Senior Education Officer
NSW TAFE Corporation

Ms Jenny Lee
Education Officer
Curriculum Services
SA Department of Employment and TAFE

Mr John Lindner
Business Studies
Adelaide College of TAFE

Mr Graham Mill
Chairman
Industrial and Commercial Training Commission (SA)

Mr Derrick Casey
Deputy Head
Regency College Hotel School
Regency College of TAFE (SA)

Mr Antonio Mercurio
Curriculum Officer
Senior Secondary Assessment Board of SA

My colleagues at the TAFE National Centre for Research and Development

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CHAPTER 1 INTRODUCTION

The need for a better educated workforce

Within Australia and particularly among educators, there is debate and deeply felt conflict on the role of education in society and the relationship which should exist between teaching and learning, training and the world of work.

Australia's commitment to initial vocational preparation is extremely small compared with other developed countries and a separation is maintained between general education and training which does not exist in most other developed countries.

Even when all forms of initial vocational preparation, including TAFE, are considered, Australian participation rates are low. Only 20 per cent of all Australian education and training places in the immediate post-compulsory years were in vocational preparation in 1985 compared with the OECD average of 49 per cent.

With increased retention in schools, a new, larger and more diverse group of students, more representative of the whole community, is remaining up to Year 12. No longer is Year 12 just a preparation for higher education entrance. Among schools and TAFE a new priority has been placed on articulation and the transfer of credit and on cross-referencing on certificates.

Education and training are generally recognised as key components in creating a dynamic, cohesive and economically sound society because:

- education enables individuals to participate in an open eand democratic society and provides a foundation for people to build purpose and meaning into their lives;
- broad-based education assists individuals to be flexible in coping with the changing demands of society and the workplace;
- the levels and quality of education and training received by a country's workforce directly affect the productivity and international competitiveness of that country;
- education and training may provide migrant and disadvantaged groups with an opportunity to enhance their lives in Australian society.

Every young person should have the opportunity to enter the workforce through a structured vocational education or training arrangement (including apprenticeships and traineeships) or through other forms of tertiary education. Appropriate entry level training provides a base for a career and for coping with change. (Department of Education and BEVFET 1990).

In this way both economics and social justice argue for young people entering the workforce to be more broadly skilled and educated. It is predicted that between now and the year 2000, for the first time, the majority of all new jobs will require post-secondary education (Johnston and Packer 1987).

The effects on students of increased school retention

Hughes (1990) points out that retention to Year 12 does not necessarily mean that the extra years at school are used appropriately. Many of those now forced to remain at school through unavailability of jobs and of alternative means of support, are the very students who have found their earlier experiences of schooling unsatisfactory.

Increased retention will be of most benefit to individuals and society if the curricula meet the needs of all students, not just the more academic. To do this, schools are looking at the particular needs and interests of those students who formerly would have been early school leavers.

Many of these students want an education which will prepare them for work rather than for entrance to higher education: an education which emphasises the practical application of knowledge and the development of practical and social competencies. There is clearly a need for much greater co-ordination and co-operation between secondary schools and TAFE.

Over the past few years participation in Year 12 and higher education has boomed in Australia. However, participation rates in vocational education have not kept pace. This is a major problem for TAFE, young people and the economy. The lack of trained people will handicap industry when the economy improves. An imbalance will emerge across the range of education and training sectors if young people view TAFE as a lesser option to higher education. The State Training Board of Victoria (1990a) argues that the community must give vocational education and training the same status as higher education: as a viable, worthwhile first and best option for young people.

Senior secondary subjects should be seen to articulate as clearly and effectively with TAFE as with the other tertiary institutions. Marsh and Parker (1990, p.3) argue that:

> We have to free ourselves of the mind set that the universities are the only destination for further study and recognise that the broad middle level of students, indeed the large majority, are better served by focussing on programs in the TAFE sector.

They recognise the need to raise the profile of TAFE, to promote its courses and to demonstrate its relevance to the substantial middle level of upper secondary school students.

Browning (1990) reported that students involved in the WA Secondary/TAFE Interface Pilot Project did benefit in a number of ways. It made them more conscious of TAFE and what it could offer, improved their self-esteem and made them more aware of the study and vocational options available.

However, if this is to happen, TAFE must ensure that it indeed offers the best option for many young people by meeting their particular needs. TAFE agencies are responding in a variety of ways in assisting school leavers to reach their three most common goals - initial employment, special longer term vocational aims and further study.

Workplace requirements

Young people entering the workforce now need:

- to be capable of responding and adapting, to the need for flexible working, social and living patterns, such as part-time work, work at home, self-employment;
- to be able, as consumers, to use new technologies and techniques and keep pace with their changes;
- to critically accept changes of all aspects and respond to the challenges of life;
- to be able to participate in small work organisation units, frequently as part of a team, often using several skills for a work process;
- to be creative and take initiatives, in problem-solving, in developing new ideas, and in contributing to the ideas of others;
- to accept and promote a work culture which values the constant upgrade of skills and knowledge;
- to be able to adapt to new processes, techniques and technologies;
- to work independently or with others to solve problems, respond and take action rather than expect or require others to do so.

Teaching methodologies, as well as course content should foster these characteristics, as well as an appreciation that vocational learning is a lifelong process. Teaching students how to 'learn to learn' is as vital as learning per se.

People now entering the workplace are likely to change their careers and workplaces a number of times. They are likely to experience periods of unemployment, they must be helped to use such periods creatively, either by creating work or by continuing their education, retraining, self-improvement, or by participation in community action and enterprise activities.

In the past the Australian workplace has been largely characterised by mass production, fairly rigid institutional hierarchies and divisions of labour and functions. In such systems the majority of employees were expected to be conformist, bringing their skills and knowledge to particular tasks which would only change gradually during their working life. The purposes and functions of education reflected this (OECD 1989).

Rapid, major economic and social changes are disrupting the status quo. Individuality, flexibility and adaptability are increasingly required in our workforce.

Kinsman (1990) considers that award restructuring will mean that all secondary students now need a solid basis of broad-based vocational skills such as applied literacy and numeracy, skills in industrial relations, health and safety in the work place, equal opportunity and career planning skills. These, she believes are fundamental to their ability to achieve the purpose of award restructuring for the individual worker - to make work a self-managed process of life-long skills acquisition and application.

Hall (1991) stresses that TAFE must be much more concerned with secondary school curricula and assessment procedures which, with their present focus on higher education, do not prepare students adequately for vocational education.

There is a growing tendency for students in the 16 to 19 age group to undertake part-time work. This brings both advantages and disadvantages. One positive feature relevant to this project is that as a result, many young people are already aware of what employers expect, and have some knowledge, skills and attributes which will enable them to get, and keep, a job.

Aims of this project

This project examines what is currently occurring at the interface between schools and TAFE in Australia and between schools and post-school vocational education overseas. It focuses on the effect of increased retention to Year 12 and the effects this is having and is likely to have upon TAFE curricula.

Sweet (1988) points out that the traditional division of learning into manual (often equated with vocational education in TAFE) and mental (often equated with academic studies in schools) is increasingly irrelevant since the operation of production equipment based on modern technology frequently requires complex intellectual processes. We simply cannot afford to have a workforce which is underskilled in technical areas.

The current move to produce curricula which lead to credit in both schools and TAFE courses, is one way of increasing these technical skill levels. As well, linked courses widen the curricula choices available to senior school students of whom an increasing proportion are destined for TAFE. This project examines ways in which TAFE may best respond to this change in its school leaver student cohort.

The population eligible to enter Australian senior secondary schools projects a reduction of 14.8% between 1988 and 1996 - this is expected to outweigh any increases in participation rates in Years 11 and 12 over this period. It is essential therefore to maximise our investment in the skills formation of this group so that no potential talent is lost at a time when the workforce is a declining proportion of the population.

KEY POINTS

- *Education and training are generally recognised to be keys to creating a dynamoc, cohesive and economically sound society.*
- *Australia cannot afford a workplace which is underskilled in technology.*
- *Every young person in the post-compulsory education years requires structured education or training.*
- *Both economics and social justice indicate the need for all young people to be broadly skilled.*
- *For increased retention to be effective it must meet the needs of all students.*
- *Many post-compulsory students are only interested in education which is directly relevant to the workplace. It is crucial that such education deserves, and is accorded, parity of esteem with academic studies.*

This project makes use of a number of different methodologies to elicit relevant information from a variety of perspectives. It was decided to focus on three vocational program areas where there are large numbers of school leavers entering formal study. The areas chosen were:

- electrical engineering which has traditionally enrolled more academically able students than many other trades. A large percentage of students therefore are likely to have completed Year 12;
- hospitality which, with the exception of some colleges, traditionally has paid less attention to academic attainment in its selection process. The effects in this area of increased retention to Year 12 are likely to be different from electrical engineering;
- business studies where nationally there has been more credit given for subjects studied at school, and greater development of link courses.

The project used a variety of techniques to gather the required information. These were:

- a literature and document search of both Australian and overseas materials to identify how various TAFE and similar systems are responding to increasing retention rates in senior secondary schools. This forms the basis of Chapters 3 and 4.
- statistical information was collected on the participation of young people in senior secondary schools and TAFE over time by gender, socio-economic level, academic level and location (urban/rural). This information is also shown in Chapters 3 and 4.
- a series of interviews was held with key curriculum staff across Australia. This information together with relevant parts of the document search form the basis of Chapter 5.
- the interviews and literature indicated a number of key policy issues which are considered in Chapter 6.
- a mail questionnaire was sent to the head teacher/senior lecturer in each of the three selected program areas in every TAFE college nationally. Of the possible 422 responses, 252 were received, giving a response rate of 60%, which is very satisfactory for a survey of this type. The results of this survey are analysed in Chapter 7 and a copy of the questionnaire is provided in Appendix III.
- a questionnaire was sent to senior curriculum officers in each State/Territory in the three selected areas. As a single officer covered all three areas in his/her agency,

22 responses were possible. Nineteen were received and these are discussed in Chapter 7. Some of this information also related to, and was incorporated into, Chapter 5. A copy of this questionnaire is provided in Appendix II.

- information was gathered on developments in a number of other developed countries as senior secondary students move into technical or further education and training. Strategies and policies in:

  - Germany;
  - United Kingdom;
  - United States of America;
  - Japan; and
  - Sweden

  were described and contrasted with the Australian developments. This constitutes Chapter 8.

- to indicate the type of overlap which may exist between the contents of TAFE courses and those in senior secondary schools, a comparison was made of the content of an ACT Institute of TAFE course (Certificate in Office Procedures Traineeship) and of Year 12 courses in business studies in two ACT senior secondary colleges. This was undertaken by a business studies lecturer from the ACT Institute of TAFE. The information is provided in Appendix I.

- at the end of the project senior curriculum officers in each State/Territory verified the validity of the material concerning their agency as at the end of May 1991.

The economic pressure for increased retention

During recent years, the Australian economy has declined relative to similar developed countries: the OECD listed Australia as the eighth largest exporter in the world in 1953; by 1987 it ranked 23rd, with a very large international debt. (OECD 1989).

Since the mid 1970s our unemployment levels have begun to rise, and despite fluctuations they are still sufficiently high to be considered unacceptable by the community and government. For school leavers the unemployment level of 27% in May 1991 is approximately 3 times the national average (of all members of the workforce.)

An economic solution is being sought, and Australia in common with many other countries has developed policies aimed to increase education and training. This is expected to lead to increased productivity and a more competitive, revitalised economy at the same time as meeting the needs of industry, the individual and society (Mageean 1991). Linking secondary courses to TAFE widens the pathways to post-school education while encouraging school retention.

Commonwealth and State governments have made increased retention rates to Year 12 a high priority. This policy is in line with Human Capitalism Theory which argues that levels of education and training in the population are significant factors in international economic competitiveness. However, increased education brings many benefits which go beyond economics and employment and include enhancing people's understanding of society and the effects of technological change within it. These increases in retention are occurring. See Table 3.1 below.

At all ages and for both sexes there has been a steady increase in school retention rates of people aged 15-19 between 1985 and 1990. The most marked increases occurred in the 17 to 19 age group. Clearly therefore efforts to increase retention to Year 12 are having some success.

TABLE 3:1

PEOPLE AGED 15-19 - PROPORTION ATTENDING AN EDUCATIONAL INSTITUTION FULL-TIME, MAY 1985 TO MAY 1990

	Males					**Females**					**Persons**					
In May	15	16	17	18	19	15	16	17	18	19	15	16	17	18	19	Total
1985	91.0	67.1	41.4	21.8	16.2	92.5	72.2	46.9	27.8	20.3	91.8	69.5	44.1	24.9	18.2	51.3
1986	91.8	68.2	44.8	25.7	21.5	92.7	70.6	47.8	29.7	21.5	92.2	69.4	46.3	27.7	21.5	53.0
1987	91.2	69.3	52.0	27.7	19.1	93.4	78.8	52.7	29.0	22.7	92.3	74.0	52.3	28.3	20.9	55.5
1988	91.6	75.7	50.2	28.4	20.8	92.9	80.1	56.7	28.3	26.5	92.3	77.9	53.2	28.3	23.8	56.3
1989	92.9	72.9	52.6	29.6	24.8	94.2	81.3	58.6	36.2	28.3	93.5	77.0	55.6	32.9	26.5	56.6
1990	92.5	73.8	56.9	31.4	26.3	96.5	82.2	61.1	39.1	29.9	94.4	77.9	59.0	35.2	28.1	57.7

Source: Australian Bureau of Statistics (1990) *Transition from education to work in Australia*

It is recognised by the community as a whole, that for young people, education is preferable to unemployment. This recognition is reflected in the increased levels and availability of living allowances for students and the withdrawal of the unemployment benefits for people under 18. The job search allowance for this age group comes with far more stringent conditions than did the unemployment benefit.

Other reasons for increasing retention

Australia in the early 1980s had only 59% of its 17 year olds still at school, whereas the top six OECD countries (USA, Netherlands, Switzerland, West Germany, Japan and Austria) all had retention rates for 17 year olds of over 80% (Commonwealth Schools Commission 1987.) Raising the educational level of the population and so increasing the pool of talent for the workforce is expected to benefit employers, workers and the economy.

Other important reasons for increasing school retention rates are:

- the need for a better educated and more flexible workforce to meet the demands of new technology and new forms of work organisation which involve multiskilling;
- the labour market for under-educated and low skilled workers is contracting and fewer jobs are becoming available for early school leavers;
- retaining students beyond the compulsory years is a means of reducing the size of the labour force and so eases the pressure on the job market generally;
- a good school education provides the basis for the individual's lifelong development, both personal and educational;
- this will provide a better educated society able to participate in, and shape, the 'Australian way of life';
- early school leaving is higher among young people from low socio-economic families, and increases their own chances of being locked into low paying, low status, insecure jobs. Thus, increasing retention rates can increase equality of opportunities for all social groups.

The last point is discussed in Chapter 4.

Table 3.2 illustrates the way in which school retention rates have been increasing over the past two decades, while Table 3.3 shows the dramatic increases in retention rates since 1984.

Increasing retention rates to year 12

TABLE 3.2

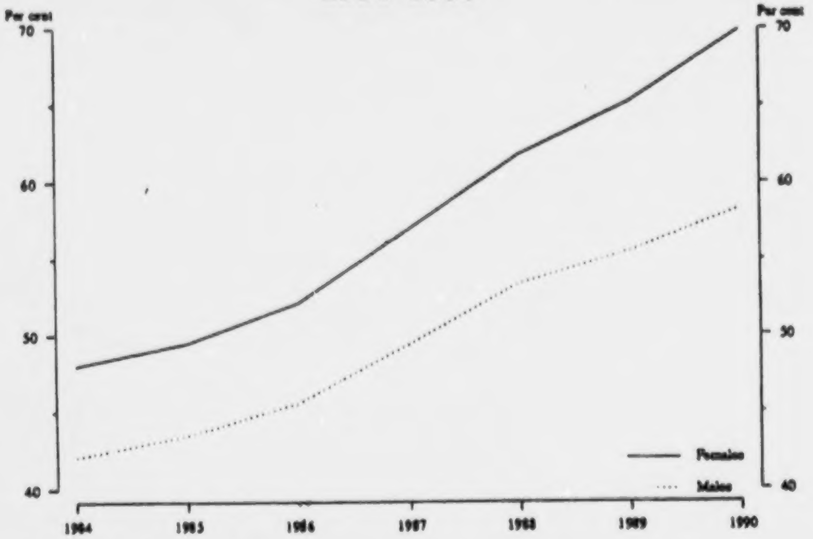
YEAR	APPARENT RETENTION RATES TO FINAL YEAR, ALL SCHOOLS - AUSTRALIA		
	MALES	FEMALES	PERSONS
1967	26.5	18.7	22.7
1968	28.5	21.2	25.0
1969	31.1	23.7	27.5
1970	33.0	25.5	29.3
1971	34.1	26.9	30.6
1972	35.7	28.9	32.4
1973	35.2	30.8	33.1
1974	34.1	31.6	32.9
1975	34.6	33.6	34.1
1976	34.6	35.3	34.9
1977	34.0	36.6	35.3
1978	33.1	37.3	35.1
1979	32.4	37.2	34.7
1980	31.9	37.3	34.5
1981	32.0	37.8	34.8
1982	32.9	39.9	36.3
1983	37.5	43.9	40.6
1984	42.1	48.0	45.0
1985	43.5	49.5	46.4
1986	45.6	62.1	48.7
1987	49.4	57.0	53.1
1988	53.4	61.8	57.6

Source: Department of Employment, Education and Training, (1990). *Statistical monograph No 3.*

The apparent retention rate of secondary students to Year 12 rose from 60.3% in 1989 to 64% in 1990. As in previous years, the retention rate for female students (69.9%) was higher than the corresponding rate from males (58.3%). The rate varied between States and Territories ranging from 44.7% in Tasmania to 86.9% in the Australian Capital Territory during this period.

TABLE 3:3

APPARENT RETENTION RATES (a) OF SECONDARY SCHOOL STUDENTS TO YEAR 12 BY SEX, AUSTRALIA 1984-1990



Source: Australian Bureau of Statistics (1991), *Schools Australia 1990*

Table 3.3 indicates that retention rates are increasing at a rate which will exceed the Commonwealth Schools Commission (1987) goal of 65% of students persisting to Year 12 by 1991. It is likely that in the near future 75 to 85 per cent of TAFE students will have persisted to Year 12.

TAFE students with year 12

Apprentices are selected by their employers, not by TAFE. However, TAFE lecturers interviewed for this report frequently stated that employers often preferred to select apprentices who have completed Year 12 whether or not relevant to the apprenticeship. Table 3.4 shows that the percentage of apprentices who have completed Year 12 is increasing. However, by 1989-90 this group still constituted only 1/5 of New South Wales commencing apprentices.

TABLE 3:4

EDUCATIONAL LEVELS OF COMMENCING APPRENTICES AND OF SCHOOL LEAVERS IN NEW SOUTH WALES

	Per Cent of All Students Leaving School After:		Per Cent of Commencing Apprentices Completing:	
	Year 10 or Less	Year 12	Year 10 or Less	Year 12
1980-81	61.4	32.8	77.0	13.6
1981-82	60.3	32.9	83.8	10.4
1982-83	59.6	33.7	81.8	12.2
1983-84	51.4	37.5	80.9	11.5
1984-85	49.5	41.4	79.3	11.8
1985-86	47.0	41.7	79.7	11.5
1986-87	44.9	44.4	78.9	12.8
1987-88	40.2	47.1	77.1	14.1
1988-89	34.4	51.3	72.6	17.4
1989-90	32.2	54.4	68.1	20.3

Source: Sweet. R. (1990). *Initial vocational preparation: facts and issues, costs and benefits*

Table 3.4 shows that between 1980 and 1990 there was an increase of 66% in students leaving school after Year 12. However, over the same period there was only a 49% increase in the percentage of apprentices who had completed Year 12. The results of the survey in Appendix IV, show that the same applies to other TAFE vocational courses.

This indicates that the apprenticeship system and thus TAFE, is not receiving its share of the better educated school leavers, although the proportion of better educated apprentices is increasing faster than the proportion of all students staying longer at school.

The following comments by a Year 12 graduate enrolled in TAFE reveal some of the reasons why TAFE is not receiving its share of the better educated school leavers:

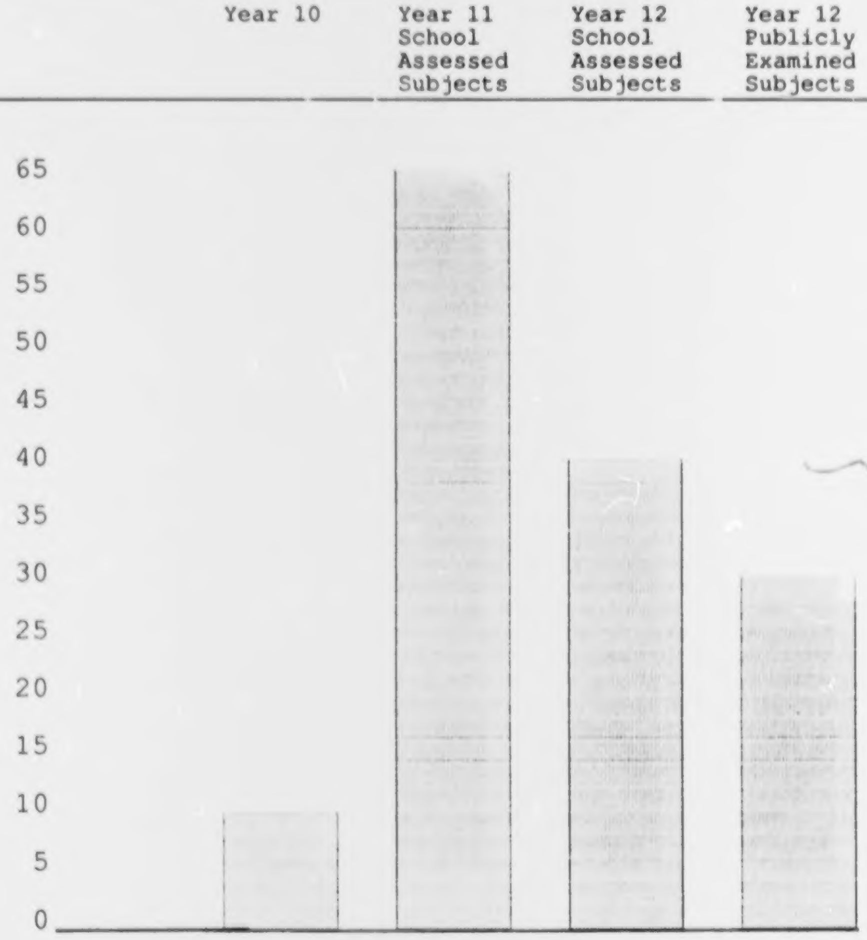
> *After completing VCE, I was unsuccessful in receiving an offer from a tertiary institution . . . I was offered a place at TAFE . . . Generally TAFE is not considered an option after Year 12. Information on TAFE is not pushed to the degree that higher education courses are. Although I knew about TAFE, I had not considered it a viable option previously.*
>
> *I felt quite comfortable at . . . TAFE and recognised that this course would be a means to further education and a career. The first year was of little challenge as it repeated work I had covered in Years 11 and 12. However, this year is improving. The course has also given me the opportunity to develop my communication skills and to gain confidence.*

> *My goal of becoming a practising accountant may be achieved more slowly than I first anticipated. Many tertiary institutions don't fully acknowledge TAFE courses and there is no standard progression from a TAFE to a degree course. Professionally the course is leaving me somewhere in the middle of nowhere.*
>
> *TAFE courses should be more highly advertised and promoted. If a course is designed for women, or if a college would like to see more women in a particular course, then the advertising should be focused more on women. Many people still believe that TAFE is mainly concerned with trades and that what they offer in some areas is not up to standard. A lot of TAFE courses are not highly regarded and are not pushed in secondary schools. Maybe a group could be set up to visit schools and to inform students about courses TAFE offers.*
>
> *The links which already exist between TAFE and other tertiary institutions should be more clearly defined and have more meaning.*
>
> *(Manson 1991, p.3)*

Even in the Electrical Trades Certificate Course which requires students with higher academic levels than most other trades, students with Year 12 are a minority and few students have tertiary entrance scores; that is, few are eligible to enter university. Table 3.5 gives the example of students at Regency College in South Australia where demand for such places is high.

TABLE 3:5

SCHOOL LEVEL OF ATTAINMENT OF STUDENTS ENROLLED IN THE ELECTRICAL TRADES CERTIFICATE COURSE - REGENCY COLLEGE SA 1990



Note: Total number of students is 124

Source: *Regency College of TAFE, South Australia*

A senior lecturer in the Electrical Trades Certificate Course at a large metropolitan TAFE college, surveyed for this project, wrote:

> *I looked at the subject and grading obtained for the first 22 students (of the 1990 enrolments) and was astonished (and often dismayed) at the academic history of these people.*

A Head of School, Automotive, wrote:

> *Our greatest problem is educational inflation - expectations of and by the students have been raised with increased school retention but in practice the level of our intake has not changed.*

This indicates that curriculum changes to lift the standard of apprenticeship courses in response to increased school retention may be inappropriate at this time.

Given the current high levels of unmet demand for higher education places and the rate at which TAFE is providing additional advanced courses (associate diploma and diploma) in which more students are enrolling, there is likely to be a significant expansion of courses for which Year 12 is a prerequisite. There is considerable support within TAFE to increase articulation arrangements with higher education. This could alter the general perception of TAFE and help it to attract more able students into its courses generally. However this also has the potential to restrict the access of disadvantaged groups.

Sweet (1990, p.224) suggests six principles against which initiatives to improve access, equity, choice and quality in initial vocational training can be assessed. Such initiatives should:

- manage all learning against clearly specified competence schedules;
- enhance the role of schools in recognised vocational preparation;
- bring general education, personal development and vocational preparation closer together;
- align the funding and accreditation arrangements applying to schools and to vocational education and training institutions more closely with one another;
- link the provision of all funds provided to firms and industries in connection with initial vocational preparation to its expenditure upon agreed skill development purposes; and
- improve the ways in which initial vocational preparation programs indicate attained competence.

TABLE 3:6

AGE AT WHICH APPRENTICES LEFT SCHOOL BY FIELD OF TRADE WHOLE OF AUSTRALIA, MAY 1990

	Metal		Electrical		Building		Vehicle		Food		Hairdressing		Other		Total	
Left when aged -	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%	Numbers ('000)	%
15	4.6	20.4	1.5	7.3	5.0	17.7	6.5	24.3	3.7	29.4	5.0	35.0	3.6	15.4	29.9	20.2
16	8.8	38.9	6.6	32.2	12.7	45.0	11.1	41.6	3.3	26.2	6.0	42.0	8.2	35.0	56.6	38.2
17-19	9.2	40.7	12.4	60.5	10.5	37.3	9.1	34.1	5.6	44.4	3.3	23.0	11.6	49.6	61.8	41.6

Source: Australian Bureau of Statistics (1990). *Transition from education to work in Australia.*

Considerable variation exists between the different trades in the proportion of apprentices who have left school early (See Table 3.6).

The effect of retention to year 12 on young women

In contrast to apprenticeships, there is a steady increase in the academic achievement of school leavers entering traineeships. Between 1986-7 and 1989-90 the percentage of entrants with a Year 12 qualification rose from 20.6 per cent to 38.7 per cent.

This is despite the relative long-term financial disadvantage undertaking a traineeship compared with an apprenticeship. As few apprentices are females and females form the great majority of trainees (see Table 3.7), this suggests girls are less likely than boys to benefit financially from remaining at school to complete Year 12.

TABLE 3:7

FEMALES AS A PER CENT OF THOSE PARTICIPATING IN THE MAJOR POST-COMPULSORY VOCATIONAL TRAINING OPTIONS

	Per Cent of Participants Who Were Female
Vocational preparation	30
Apprenticeship	12
ATS traineeships	70
Full-time TAFE or equivalent	53
Other work-study combinations	67
Years 11 and 12	52
Higher education	54

Source: Sweet, R. (1990). *Initial vocational preparation: facts and issues.*

Of any OECD country, Australia has the greatest sex segregation in the workforce. In 1988, 55% of women in the workforce were clerks, sales or service workers, and even in those industries where they predominate numerically, they were very under-represented in the highly paid positions. Australian women workers are thus segregated both vertically and horizontally (Bradley 1989).

By introducing TAFE subjects in the senior secondary school and providing credit for these towards TAFE courses it is hoped to widen girls' choices, especially at the crucial period of subject choice at the end of Year 10. At this point large numbers of girls traditionally have effectively selected themselves out of many career paths in the trades and technology.

By increasing girls' awareness of TAFE programs and its credibility and acceptability by its association with schools, girls may be encouraged to widen their choice of subjects and thus plans for post-compulsory education. In addition, their participation in formal training and on-the-job training, all of which have traditionally contributed to gender segregation in the Australian workforce may be increased.

Unfortunately, this broadening of choices is not yet happening to any large extent. Schofield (1989) points out that in the joint secondary schools/TAFE programs, girls' choices are still largely limited to areas such as child care, office studies and (potentially better) travel and tourism which are comparatively poorly paid and have restricted career opportunities. Boys on the other hand are choosing accountancy, real estate and industrial economics.

At present there is no national, or even statewide system for encouraging girls to participate in school/TAFE linked programs. This can be contrasted with Sweden where very little gender-biased job segregation exists and considerable effort is made to ensure that girls seriously consider selecting technical programs at upper secondary level.

Implementation of the National Plan of Action for Women in TAFE (1991) and the national projects associated with this, should do much to alter those traditional attitudes to TAFE which have created a barrier to girls' access to many of the challenging and well paid jobs where capable young people are needed for Australia's economic recovery.

The status of vocational versus general education

Sweet (1988) argues that the creation of additional full-time TAFE places for Year 10 and Year 11 leavers in isolation would not resolve some of the fundamental problems that have kept Australian levels of participation in vocational programs so low. The essential first step is to reform post-compulsory credentialing in order to provide students with relevant and meaningful educational experiences, while avoiding the social divisiveness that comes from alternative curricula.

Considerable debate has arisen over the concept of a common curriculum, or at least a common core of essential learning in Years 11 and 12. Sweet (1988) states that inevitably this creates courses with an indeterminate relationship to labour market requirements, and courses without the rigour of properly accredited vocational courses.

Only if the key problem of the different status accorded to different bodies of knowledge is resolved can these outcomes be avoided.

A common credential rather than a common curriculum in the post-compulsory years may be the solution. Parity of esteem for vocational courses and non-vocational courses requires a single post-compulsory certificate, common across both TAFE colleges and secondary schools, in place of the present separation of credentials. This would allow for flexibility, diverse patterns of attendance, mixed TAFE and school courses over two or three years to achieve an educational award with recognised links to both higher education and the labour market.

The dominance of the apprenticeship system in Australia has created a tradition of rigidly separating 'general education' and 'vocational training'. In the rest of the world, except the United Kingdom, these are much more closely interwoven.

In Australia there is only a slow increase in the percentage of those who have completed Year 12 entering apprenticeships. While more apprentices have left school at ages 17 to 19 than at earlier ages, this is not true for all trade areas, and in 1990 a significant number entered after leaving school at 15 years of age, particularly in the vehicle, food and hairdressing trades. Clearly any modifications to TAFE curricula should not create barriers for such people. This indicates that increased flexibility, possibly through modularised, self-paced units which permit extension work, and competency-based assessment rather than time-serving, are essential within curricula designed for entry courses within TAFE.

The State Training Board of Victoria (1990a, p.20) predicts:

> In future, the majority of students will therefore complete 12 years of schooling before moving to vocationally-oriented, specialised courses in TAFE or higher education.

However, a study of students' choice of occupations and paths in education indicated in 1987 that less than 10% of Victoria's Year 12 students intended to go to TAFE the following year. It also revealed that apprenticeships are becoming less attractive to school leavers.

The Victorian State Training Board warns that an imbalance could arise between general education and vocational training, if too much emphasis is put on retention to Year 12 and transfer to higher education at the expense of promoting the value of TAFE programs. The Board urges the use of target participation rates for school leavers transferring to TAFE.

As more young people complete Year 12 and move directly into TAFE courses, they are competing for places in some courses, with TAFE's traditional student group (generally adults who did not complete Year 12). There is considerable unmet demand for TAFE places: the Training Costs Review Committee (1990) states that in 1990 over 100,000 people were unable to gain entry to the vocational and preparatory courses of their choice. This number is likely to increase as unemployment rates rise and competition for jobs becomes more intense. Increasing numbers of people will try to improve their chances of employment by undertaking such courses.

Aggregate tertiary entrance score is now being used in some TAFE selection procedures. Yet the extent to which this score as it presently exists is a valid selection measure for such courses must be questioned. A project commissioned by the TAFE National Centre on the predictors of success in TAFE courses is currently exploring this issue.

Hall (1991) states that there will be greater momentum in the upward academic drift of TAFE, as it moves into the vacuum left by the amalgamation of the CAEs with universities. The emphasis upon high tertiary scores as a prerequisite for selection into TAFE can be seen as an indication of this.

It is essential that TAFE continues to provide structured vocational training opportunities for those who leave school early and who are therefore disadvantaged in the job market. The House of Representatives Standing Committee on Employment, Education and Training (1989) states that the labour market for early school leavers has declined sharply and is likely to contract further. This indicates a need for bridging courses, study skills courses, etc. For many of those who leave school before Year 12, TAFE offers the opportunity to obtain qualifications in lieu of Year 12, and/or a second chance to obtain higher education entrance.

Although far more people attend TAFE than attend higher education courses, the emphasis within schools is predominantly on preparing students for higher education. The Report of the House of Representatives Standing Committee on Employment, Education and Training is one of many which has been concerned about the guidance provided to school students relating to the further study and career options open to them. That report found guidance in this area to be generally inadequate and provided too late to make real changes in students' expectations and attitudes. The increasing joint curricula developments between schools and TAFE recognise TAFE study as a worthwhile aspiration for school leavers. Changes to Year 11 and 12 school curricula reflect both this and the fact that more school leavers study in TAFE than at university. As well, these changes provide wider curricula options for all senior secondary students. This is a first, if still small, step towards a more balanced attitude by schools.

KEY POINTS

- *The Australian economy has declined compared with similar, developed countries and the government has responded by placing greater emphasis on education and training.*
- *Senior secondary school retention rates are steadily growing across Australia for both males and females.*
- *Despite this, the number of academically more able students entering apprenticeships is not rising proportionally.*
- *It is inappropriate, at this stage, to raise the academic standard of apprenticeship courses in response to increased school retention.*
- *It is hoped that joint schools/TAFE courses will increase the community's knowledge and acceptance of TAFE courses and provide parity of esteem with academic courses. This may increase girls' subject and vocational choices.*
- *Unmet demand for TAFE courses is likely to increase.*
- *The use of tertiary entrance score in selection for TAFE courses is often unjustified.*
- *The need remains, and is increasing, for special support for early school leavers.*

Young people's chances of a full secondary education can be critically affected by their socio-economic background; whether they attend a government or a private school, whether they live in a city or in the country, their ethnic background, and whether or not they are Aboriginal.

Increasing retention rates are changing the composition of Year 12. McKenzie and Alford (1990) found relatively faster rates of growth in Year 12 completion by students from lower socio-economic status families, students from English speaking backgrounds (ESB), students who had been relatively poor achievers in their early school years and students from government schools. The NBEET Working Party on Rural Education (1991), found relatively faster rates of growth in participation by students from rural areas.

However it is important to recognise that except for ESB students, these comparatively high growth rates in Year 12 completion have occurred from a very low base. Year 12 composition is still strongly skewed towards students from privileged family backgrounds and the academically more able, many of who are aspiring to gain university entrance.

Table 3.2 above shows that only 43% of male students from the most disadvantaged socio-economic grouping completed Year 12 in 1987, compared with 76% of those from the highest socio-economic group. Students from private schools are significantly more likely to be Year 12 persisters than those from government schools.

A commonly expressed concern is that TAFE is trying to divest itself of responsibility for the training of a large number of students by setting prerequisites that are too difficult to achieve for the poorly resourced and low achiever. Entry requirements to almost all post-year 10 courses call for achievement levels which could only be attained by middle level or better students (Browning 1990). Widespread support exists for the belief that TAFE, with its post-school ethos, offers a more appropriate setting for dissatisfied and poorly motivated students than does school.

Low achievement is complex and not necessarily due to lack of inherent ability. TAFE courses, with their relevance to work and practical emphasis, may motivate many low achieving students.

TABLE 4:1

ESTIMATED YEAR 12 COMPLETION RATES BY GENDER AND SOCIO-ECONOMIC GROUPING, AUSTRALIA, 1987 (Per cent)

GENDER	SOCIO-ECONOMIC GROUPING										
	1	2	3	4	5	6	7	8	9	10	TOTAL
MALES	43.2	40.0	43.9	47.1	48.6	46.8	51.0	55.2	63.3	76.3	51.5
FEMALES	53.3	49.6	57.6	58.2	61.2	56.7	61.0	67.2	75.0	84.0	62.4

Note: In this table socio-economic groupings are represented in groups (or deciles) of approximately equal population size which are ranked in increasing order of socio-economic status. Group 1 represents that one-tenth of the senior secondary age population living in the most socially and economically depressed areas of Australia, while Group 10 represents that one-tenth living in the most socially and economically advantaged areas.

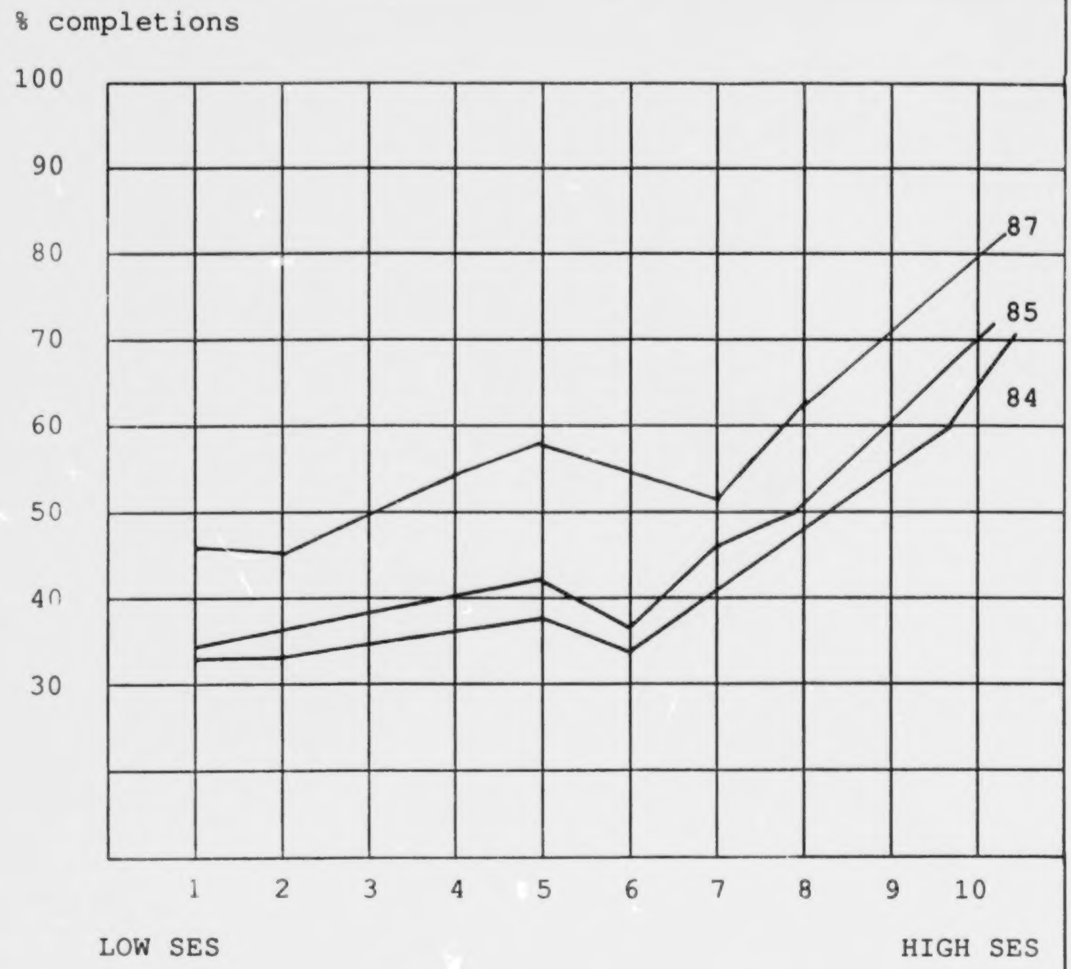
Source: Commonwealth Schools Commission (1987). *In the national interest: secondary education and youth policy in Australia.*

The above table indicates that young people from the most advantaged socio-economic groups are considerably more likely to complete Year 12 than those from less advantaged backgrounds. A minority of the Year 12 age population - those in the highest socio-economic groups - complete Year 12 at above average rates. The remainder, about 70% of the Year 12 age population, complete Year 12 at below average rates.

The percentages of students from the lower and middle socio-economic levels who are persisting to Year 12 are increasing at a higher rate than those from the highest socio-economic levels so that differences, although still very marked, are being reduced. Table 4.2 illustrates this.

TABLE 4:2

SOCIO-ECONOMIC STATUS (SES) OF YEAR 12 COMPLETERS IN 10 PER CENT GROUP 1984-1987



Source: *Media release 45/89 J. Dawkins, Minister for Employment, Education and Training*

Young people in rural areas

In all States young people living in urban areas are more likely to complete Year 12 than those who live in rural areas, although variations exist between individual regions. Table 4.3 illustrates this.

TABLE 4:3

YEAR 12 COMPLETION RATES BY URBAN/RURAL AREA AND STATE, 1987 (Per cent)

STATE	AREA	COMPLETION RATES
NSW	Urban	49.8
	Rural	41.9
VIC	Urban	61.7
	Rural	56.6
QLD	Urban	77.2
	Rural	58.3
WA	Urban	59.8
	Rural	45.3
SA	Urban	72.4
	Rural	67.3
TAS	Urban	51.2
	Rural	29.2
NT	Urban	52.6
	Rural	29.2
AUSTRALIA	Urban	61.3
	Rural	49.5

Note: The ACT has virtually no rural students

Source: House of Representatives (1989). *The restless years: an enquiry into year 12 retention rates.*

Country boys in particular have low retention rates, as many go straight from schools into manual work; for example, mining and fishing. Guthrie and Krzemionka (1987) found that rural youth very much valued any opportunity to remain in their communities while compeleting school and/or studing at TAFE. However this is not always available and the expenses of moving to larger centres and the lack of supervised city accommodation for young people means that many who might have gone straight from school to TAFE do not. For country girls there is the problem of too few jobs in small rural communities. For many girls in smaller rural communities remaining at school is the only option to unemployment (NBEET Working Party on Rural Education 1991).

NBEET (1991) found that, in the period surveyed (1984-1989) although completion rates for students whose homes are in rural areas are lower than metropolitan rates, they rose more rapidly Australia wide than did metropolitan students' rates. NBEET reported a 46% increase in rural Year 12 completions compared with a 29% increase in metropolitan completions. The NBEET report emphasises the need for greater flexibility in institutional structures in rural areas. For example, clear distinctions between

TAFE and senior secondary schools can be inappropriate in small communities with limited resources.

The NBEET report concludes that the most appropriate organisational structure for education and training in non-metropolitan areas is one based on co-ordinated cross-sectoral provision. The provision of TAFE courses in schools and senior secondary courses in TAFE is in harmony with this.

Linked programs in rural areas will help to provide the curricula choice demanded by 16 to 19 year olds wherever they are located. In curriculum development it is important to recognise that programs designed in and for urban areas may be inappropriate for the education and training needs of rural communities.

The Department of Primary Industries and Energy (1989) argues that rural people may consider that completing Year 12 or obtaining higher qualifications are of little value, since, traditionally they have not been required for many jobs in primary industry or small family businesses. This perception, the Department considers, is a major reason for the comparatively low retention rates in country areas.

This has important implications for TAFE curriculum development: programs offered to school leavers in rural areas must be designed to meet the vocational education needs of that region. By involving the community in curriculum decisions and increasing communication with potential students, their families and schools, TAFE will help counter negative attitudes towards post-compulsory education.

Primary producers are becoming increasingly aware that, to compete successfully in domestic and world markets, they need the skills to use new technologies, products and management practices. They need education to respond to land degradation and soil conservation. Mining companies now require higher levels for basic entry, often Year 12.

Rural communities are recognising that to survive they must diversify the local employment and skills base. The time is ripe for TAFE to work co-operatively with rural communities and their schools to ensure these needs are met.

The joint Western Australian school/TAFE ministerial taskforce (1990) discusses the model of a joint institution which would offer Year 11 and 12 programs as well as post-secondary TAFE courses on a shared site.

When combined with modern telematics and telecommunications technologies, this model is particularly suitable for small and rural communities with limited access to post-compulsory education opportunities. A school site could be used to offer a range of secondary and post-secondary courses thus widening the options for all the students. Normal school hours could be extended and a mix of school-age and adult students catered for. Other local community and business interests could lend their resources and facilities to further enhance the educational opportunities.

This model allows smaller rural schools to develop clearer links with post-school options and it provides an opportunity for isolated students to experience further education which, for many, would not otherwise be possible.

Students from ethnic backgrounds

The little data that exists on the effect of ethnic background on retention rates suggests wide differences between different groups. Students from the longer established ethnic communities tend to have similar retention rates to other students, while those from newer, less established communities frequently have lower rates (House of Representatives 1989).

The key factors which have been found to affect retention rates of students from non-English speaking backgrounds (NESB) have been their level of English language literacy, their understanding of the Australian workplace and the educational system and socio-cultural issues such as attitudes to women's participation in TAFE. The House of Representatives (1989) reported that a number of researchers have found that NESB girls frequently had lower retention rates than NESB boys.

The most educationally deprived group of school leavers are Aborigines and Torres Strait Islanders (Hughes et al 1989). Although their retention rates have increased dramatically from 8.5% in 1979 to 29% in 1988, this is still far below the national average of 57.6% in 1988.

General issues relating to special groups of students

These differences relate to matters of equity and social justice which must be addressed, or the achievement of higher school retention rates will be undermined. TAFE has traditionally been concerned with providing access to education for these under-represented groups. It is vital for a cohesive and equitable society that in responding to the new, better educated clientele created by increased retention to Year 12, TAFE does not neglect the special needs of those who are not participating in senior secondary education.

KEY POINTS

- *Retention to Year 12 is related to socio-economic background, type of school attended, location (city/rural) and ethnicity.*
- *Year 12 retention is still strongly skewed towards students from privileged family backgrounds and the academically able.*
- *There is concern that TAFE is divesting itself of responsibility for people with lower academic achievement.*
- *Post-compulsory programs in rural areas must be designed to meet the special needs of the region and, in smaller rural communities, all educational resources should be pooled.*

Advantages of linked courses

As an increasing majority of students are remaining at school to complete Year 12, an important issue for TAFE is the articulation between senior secondary school and TAFE.

There are numerous pathways which young people of post-compulsory age may follow. Thus those who wish to move in any direction between school, TAFE, employment and training, and higher education should have access to courses that articulate clearly and efficiently by:

- the granting of credit towards TAFE awards for suitable study undertaken at school; and
- the accreditation of suitable TAFE studies as units contributing to tertiary entrance or as part of the senior secondary certificate.

By increasing the range of curriculum options, senior secondary/TAFE linked courses allow senior secondary students to explore their vocational interests while broadening their education without prematurely closing their educational options.

These studies are not narrowly job-specific but have the broader purpose of using vocational education as a means of teaching academic and other cognitive skills, and for linking thought with action through practical experiences. Vocational subjects provide an employment context and so can motivate some students in ways that more academic studies do not. They have the potential to provide students with a broader range of personal, intellectual and work-related skills than are developed by academic studies alone. Students benefit by acquiring job-related, transferable, general skills.

Even when school students have no intention of undertaking future studies through TAFE, joint programs will help them develop skills, knowledge and attitudes which are needed for informed decision-making about post-school vocational options. The courses help in the transition between school, post-school education and training and the workplace and are a basis for multi-skilling. By providing proper recognition of skills gained they avoid duplication of study.

The strong links traditionally between schools and higher education have not existed between schools and TAFE. Schools and their students tend to know little about the prospects for TAFE study following Year 12, with the result that few students enter Year 11 with a TAFE course in mind. The schools are more likely to channel students towards higher education even when this may be inappropriate.

Schools/TAFE linked courses will bridge these sectors, provide coherence and help reduce the differences in status of the different courses in post-compulsory education.

Marketing TAFE in schools will help schools to clarify for their students the connections between their studies and post-school options in TAFE, as well as the value of these. When the connections between their studies and future work/life roles are made clear, vocational studies are seen as relevant and valued by the students, their parents and employers. Status then accrues to such courses.

Pettit (1988) gives another, very practical reason, for increasing the joint provision of courses - the dramatic 25 percent fall in the Australian birth rate between 1971 and 1981. This has led to declining enrolments in schools and in some areas, particularly some rural areas, a subsequent surplus of school accommodation on which increased retention will have only a marginal effect.

The current economic down-turn has placed extra pressure on educational providers to obtain maximum value from their available resources. Redefining the TAFE/schools interface is one way of responding to this. NBEET (1991) recommends the bringing together of all post-compulsory educational resources in smaller rural areas to maximise the offerings available to students and achieve whatever economies of scale are possible. Pettit advocates an inclusive organisation to cater for traditional school and TAFE areas as well as community education. This seems an appropriate model in smaller rural communities.

Concerns with linked programs

Despite many outstanding individual successes in TAFE/schools co-operation . . .

> the level and direction of school-based action is outstripping the infrastructure. The mechanism for accreditation and certification is not catering adequately for the expanded group of students. Curriculum development and assessment across the phase is uneven and is based on outdated assumptions about students' destinations and work skills. As a consequence, despite their best efforts, individual schools have been severely limited in the extent to which they have been able to respond to the need for change.
>
> (Joint School/TAFE Ministerial Post-compulsory Education Taskforce 1990, p.5.)

If school/TAFE links are to be strengthened, a well established framework for communication and decision-making is needed, reinforced by a conviction on the part of all participants that the exercise is worthwhile and a commitment to its success. The Taskforce identified some West Australian problems which are likely to arise in any joint schools/TAFE program. These are:

- the inappropriateness for school students of TAFE courses which have been designed for a different student group;

- lower ability school students may experience considerable difficulties in undertaking TAFE courses which have been designed to cater for a more homogenous group of TAFE students;

- management problems may arise, such as inconsistencies in decisions negotiated at the school or TAFE college level;

- problems in dealing with two separate authorities over certification, accreditation, moderation and assessment;

- industrial issues with school teachers teaching TAFE courses, or TAFE teachers teaching in schools;

- logistical problems related to differences in lengths of terms, flexibility of hours, dates of holidays and requirements for contracts;

- the need for teachers to be familiar with TAFE exemptions and pathways, to be able to appropriately advise students and their parents;

- although it is generally recognised that TAFE provides a more appropriate ethos for older learners, merely offering TAFE subjects in a traditional secondary school setting alters neither the school's ethos nor its patterns of organisation and resourcing.

There exists a variety of relationships between schools and TAFE, with some school students attending TAFE courses or receiving credit towards TAFE awards for courses done at school. Hall (1991) warns that these arrangements and the re-establishment of technical high schools in some States means that TAFE will lose students to schools, especially if TAFE charges fees while schools do not. The difference in treatment with regard to fees between young people in schools and their contemporaries in TAFE will become an important issue.

More students who have completed Year 12 are going directly into TAFE courses. These include apprenticeships and traineeships but also an increasing number of other programs. This means that the effects on TAFE of increased retention to Year 12 is complex and its ramifications across TAFE curricula will be widely spread.

Jones and Krzemionka in 1987 raised a number of curricular concerns about joint schools/TAFE co-operative programs which were then at an early stage of development. Among these concerns were that joint schools/TAFE certification rarely counted for higher education entrance, and that in many cases the programs were merely using pre-existing TAFE courses designed for a different student group. The Commonwealth Schools Commission (1987) questioned whether such programs meet the educational needs of secondary students. There was concern also that the content may be too narrowly skills-based to work towards the general educational goals of developing skills in reasoning, analysis and synthesis.

It is pleasing to observe in 1991 that some progress, albeit small, is being made in both of these areas. For example in NSW a number of Board of Secondary Education approved joint secondary schools/TAFE courses are accepted by universities as matriculation status subjects and in South Australia there are a number of joint curricular activities to develop TAFE accrediated courses which are particularly suitable for senior secondary students. Indeed, work is either being undertaken or is planned in these areas in most States and Territories (see Appendix IV).

There are a number of difficulties associated with developing integrated school/TAFE programs. These include:

- differences in school and TAFE timetables;
- the time and cost involved in travelling from one institution to another;
- ensuring that work done at TAFE is properly recognised and accredited by school authorities, and that done in schools is recognised and accredited by TAFE; and
- uncertainty whether schools or TAFE should fund link programs.

Some schools have a conscious philosophy of providing students with a taste of technology and allowing them to experience the satisfaction of completing a task even if it is not to a recognised standard. In TAFE the students' work would not be accepted unless it met the standards.

When a student has been taught a skill using incorrect techniques or standards these will have to be 'unlearned' if the student continues to study in this area. Far from being bored by a duplication of studies, such a student may find the new program harder than one who comes to it fresh and without misconceptions.

A national survey of TAFE curriculum experts (described in Chapter 6), plus an examination of course documents and interviews with a sample of 6 key TAFE staff in NSW and SA indicates that the existing formal advanced standing arrangements between senior secondary education and TAFE are very limited. However, all States and Territories indicated that they were developing these, and that formal advanced standing would be increased over the next few years. The House of Representatives Standing Committee on Employment, Education and Training (1989) strongly urged the States and Territories to ensure that school/TAFE link policies provide sufficient support to schools and TAFE to extend link programs.

> It is important to use resources not simply to reinforce an escalating system that is less than satisfactory, but to test new approaches and to extend the

> array of options available to young people for the acquisition of occupational competence.
>
> (Sweet 1990, p.245)

One of the key ways by which these new approaches have been developed and tried is through credit arrangements between schools and TAFE.

Ways of overcoming difficulties

Criteria have been developed for providing credit in TAFE for senior secondary subjects. The Joint State Training Board/Victorian Curriculum and Assessment Board Articulation Working Party has established a number of principles of articulation. These form an excellent reference against which to consider credit arrangements between TAFE and schools. They state that articulation arrangements must consider:

- The integrity of courses.

  The establishment of credit value should be directly related to the content and work requirements of the course or units and less to the intent and duration of the course. Not all courses within a field of study can or should articulate.

- The opportunity to maximise credit.

  The purpose of articulation is to facilitate the progression of students. The arrangements should aim to maximise access and reduce the amount of repetition between courses and thereby reduce the time taken for completion.

- A student's whole program or an appreciable part of it.

  VCE student programs and TAFE courses should be the focus when determining credit. Comparison only on a subject to subject basis is limiting.

- Joint sector involvement.

  Potential for maximum articulation is enhanced when the experiences and expertise of both agencies are involved in determining the extent of arrangements.

- The arrangements for articulation should be built into the policy frameworks of respective agencies.

- Articulation arrangements should be published.

  Articulation arrangements should be readily accessible to all potential students (for example through course handbooks) to inform them of the ways to make use of their prior education.

  (State Training Board 1990,p.I)

For credit to be given in TAFE for courses taught at school, these courses must be taught to at least the same standard as in TAFE. Schools seldom have the quality and quantity of technical equipment available in TAFE colleges, and sometimes school teachers do not have the technical experience and expertise of TAFE teachers.

This is recognised, for example, in recommendation 6 of the joint project on travel and tourism for the Senior Secondary Assessment Board of SA, SA DETAFE, the SA Education Department and the industry:

> Provision should be made to increase teachers' awareness of the travel and tourism industry through in-service activities.
>
> (Crowhurst 1990 p.14)

The ways in which school/TAFE links are being explored in each of the States and Territories is described in Appendix IV.

National issues in TAFE/school links

The Joint Western Australian School/TAFE Ministerial Post-compulsory Taskforce (1990) considers that for most students, TAFE should become a post-Year 12 rather than a post-Year 10 option as this would formalise what is already occurring with increasing numbers of students enrolling in TAFE after completing Year 12. General vocational training undertaken at senior secondary school would provide a strong basis for future TAFE studies. This is particularly valuable, since in TAFE there is renewed emphasis on more specific skills training in response to shifting labour market requirements.

Establishing the successful completion of Year 12 as a prerequisite for admission to all (revised) TAFE courses would clarify the school/TAFE interface. It would also provide a clear long-term goal for curriculum rationalisation and development for both the schools and TAFE sectors.

The Taskforce identified problems encountered with schools/TAFE link courses. These include the skills-specific nature of the TAFE subjects, gender stereotyping, lack of coherence in student programs and the absence of a recognised credential on completion.

A pilot project undertaken in Western Australia to solve such problems has been partially successful. It involved students undertaking study programs with a mixture of school and TAFE subjects, all of which were approved by the Secondary Education Authority (SEA) and contribute towards secondary graduation. This has led to the development of more coherent study programs with clearer links to post-school options. Students were pleased with the greater relevance of their studies. Some students in the pilot project were able, over the two years, to complete a one-year TAFE Certificate course as well as achieving secondary graduation.

Although the Taskforce considered that these successes meant that the pilot project was a useful starting point from which to develop a framework for post-compulsory education, it also was concerned that there were significant shortcomings in the pilot program. The fundamental problem of the inappropriateness of TAFE units for school students was not addressed. There was also some evidence that lower ability students undertaking TAFE units in schools were experiencing difficulty and required bridging courses. Resource and management problems were also identified.

These problems are likely to arise in any TAFE/schools linked program and create policy and resource dilemmas. A 'Schools/TAFE Co-ordinating Committee' was formed in Western Australia to address some of these jointly. It identified three broad goals to be achieved within the overall post-compulsory phase of education:

- to rationalise and reconstruct the school curriculum, and to improve articulation with TAFE courses to better meet the aspirations of students who were not bound for higher education;
- to introduce a greater degree of vocational direction into the post-compulsory schools curriculum whilst maintaining the integrity and rigour of higher education entrance requirements; and
- to provide access to improved counselling and career information for all students.

The work of the Co-ordinating Committee highlighted the need for a broader perspective and a common framework within which to address these goals.

School-provided courses accredited by TAFE generally have restricted resources available for delivery of courses compared to those available for the same vocational training in other institutions. This presents a serious difficulty for many secondary schools as generally they are not built, equipped or staffed to provide job-specific skills in the way TAFE is. In the ACT some senior secondary schools have resolved this problem by arranging for TAFE to deliver the job-specific components of their courses. This has been highly successful.

Others have attempted to achieve this using only their own resources or those of non-accredited private training companies. Kinsman (1990) argues that this is an unwise duplication of effort which is hard to justify, particularly considering the questionable quality of such effort. She argues that in the current economic climate, discussions about educational rationale and curricula must consider resources and that offering job-specific components of a course through TAFE is more expensive than through schools. However, Kinsman points out, good quality situational learning and industry-based training is expensive.

The current co-operative efforts by some schools and TAFE colleges to integrate existing TAFE units and courses with courses for secondary school graduation represent an interim phase. These programs are perceived to have greater student relevance and clearer articulation with TAFE than those without such integration, and assist in the transition from school to the workplace or vocational training.

The Taskforce considered that following strategies would strengthen the links between schools and TAFE:

- *rationalisation* (through a systematic five-year cycle of curriculum area review) of existing TAFE certificate courses and accredited and registered Year 11 and 12 courses. From this would develop some new and revised senior school courses designed to articulate with further studies in TAFE and/or employment, and also where appropriate, with higher education;
- *strengthening links between schools and employers* to ensure that those students intending to move directly into the workforce after school not only have the necessary skills to participate fully in the wider society, but also have skills which employers consider to be broadly useful and are a sound basis for possible return to study or further training in the future; and
- within senior schools, *increasing the profile and information* about TAFE study and employment goals so that students and their parents consider TAFE programs viable and worthwhile.

KEY ISSUES

- *Linked courses increase the range of curriculum options for school students, allowing them to explore their vocational interests and broaden their education without truncating their educational options.*
- *They can motivate some students in ways which more traditional school subjects do not.*
- *They avoid duplication of effort by joint accreditation.*
- *Linked courses allow educational providers to maximise the use of their resources.*
- *Such courses must be specially and co-operatively designed by both sectors.*
- *The effects on TAFE of increased retention is complex and its ramifications will be widely spread across TAFE curricula.*
- *Existing formal advanced standing arrangements between secondary education and TAFE are very limited. However, all States and Territories are developing and increasing these.*
- *Schools seldom have the technical equipment to teach in some vocational areas, particularly those requiring expensive, and/or high technology equipment.*
- *School teachers may not have relevant industry experience.*
- *Should TAFE require Year 12 or equivalent as a prerequisite for all courses at trades level (Streams 3200) and above?*

For many people, including TAFE lecturers, there is concern about the balance and relationships between liberal education producing a well educated individual, and vocational training producing the highly skilled workforce required by industry. Mageean (1991) found many TAFE lecturers were concerned that TAFE's goal was changing from provision of vocational education to the community to much more specific skills training provided on a commercial basis to industry.

Pring (1986, p.114) discusses the two separate and opposing trends as the curriculum has been made more vocational:

> The one is a stress upon training at the expense of education, motivated ostensibly by the need to meet industry's requirements but . . . implicitly by the anxieties over the social consequences of an educated youth whose aspirations society may not be able to fulfil. The other trend within the broader interpretation of vocationalism has been to examine more carefully the problems of personal development in a world that lacks the predictable routes into the future that until recently prevailed.
>
> To choose a proper balance between these trends - to reconcile the differences - is imperative . . . It requires, a reconsideration of the way we conceptualise our task - a questioning of the old dichotomies between liberal and vocational . . . Failure to do this will not ultimately serve the needs of industry, whatever the emphasis upon skills. Rather will it create a disillusioned and alienated generation . . .

This is related to the issue of the respective roles of schools and TAFE and the extent to which there is overlap between their provision. If school curricula are to cater for the needs of all senior secondary students, the existing dominance by higher education, which will be the pathway for only a minority of students, must go.

These concerns arise in a new context but the issues are far from new. The Victorian Royal Commission on Technical Education commented in 1901 (p.146):

> The necessity for a progressive and comprehensive movement that will keep Victoria abreast of other communities is a pressing one . . . Nothing less should be aimed at than complete provision for the universal training of all youth of the country (beyond the State school period) by such courses of instruction as will provide for skilled and intelligent work in the various departments of our industrial and commercial life.

The attitude of the South Australian Government typifies that of the States and Territories towards this issue. The South Australian Ministers of Education and of Employment and

Further Education (1990) have stated that a major objective of joint schools/TAFE accredited courses will be to maintain, in both content and delivery, a balance between the knowledge and competencies of vocational preparation and a general education.

This co-operation and co-ordination aims to enable senior secondary level students to select and pursue vocationally oriented educational training which will challenge their abilities, lead to outcomes which are positive both educationally and vocationally, and ensure that resources are used efficiently and productively.

More than ever before, education and training are vital factors in our efforts to become a 'clever country' and provide an increasingly skilled workforce for our modern, more sophisticated and technological economy.

Many students now remain in the senior secondary school to enhance their chances of obtaining a job. These students want school to be more relevant, interesting and work-related (House of Representatives Standing Committee on Employment, Education and Training 1989). These students are more likely to be stimulated and motivated to learn when the curriculum is linked with their career aspirations.

Beare and Millinkan (1988) point out that in the present post-industrial conditions, preconceived notions about employment, careers, and the workplace will have to change. Occupational training programs, must change - most are now likely to require twelve years of schooling at entry level.

Schools are concerned with the provision of a well-rounded general education:

> The role of the education department is to provide a broad, balanced and relevant modern education for each primary and secondary student.
>
> (Ministers of Education and of Employment and Further Education (SA) 1990, p.I)

This can be contrasted with the role of TAFE which:

> is to provide tertiary education and training at a range of levels and in many study areas to ensure that all adults have a proper opportunity to participate purposefully in lifelong, recurrent education.
>
> (Ministers of Education and of Employment and Further Education (SA) 1990, p.I)

In addition, in South Australia and some other TAFE agencies there is also the objective of providing:

> study and career pathways to potential and present TAFE students by ensuring articulation between TAFE courses at

> the various levels, between schooling and TAFE, and between TAFE and higher education.
>
> (Ministers of Education and of Employment and Further Education (SA) 1990, p.I)

In an interview for this project, the Chairman of the South Australian Industrial and Commercial Training Commission stated that he believed that school programs should not be specific or narrow career or vocational courses in their own right, but may be vocationally or career orientated studies which might, for instance, illustrate mathematical or physics problems using examples from technical vocational areas.

The Career Study Pathways Program which is being developed currently in South Australia is designed in this way, and its content is determined significantly, and given meaning through consideration of particular career areas. The program aims to teach the skills and use the delivery methods relevant to the career area, emphasising self-motivation.

This program is being designed to establish career pathways for Year 12 students, with credit into TAFE courses and to skills and knowledge which will assist them gain employment. This can be undertaken as part of the requirements of the South Australian Certificate of Education. It is believed that this strategy may motivate the many senior school students who are looking for an education which will assist them to move into employment or vocational education.

Dawkins and Holding (1987) were concerned with the needs of the increasing numbers of students who have no wish to undertake higher education and are now continuing with their secondary education. These students require alternative curricula which give a purpose to their continuing presence at school.

The Commonwealth recognises that if retention rates are to be increased, new approaches are required to make the final years of secondary education more attractive and relevant to a wider range of young people. Dawkins and Holding acknowledged that curriculum reform will be an essential element in this process. This will require co-operation and co-ordination between TAFE, schools and other interested bodies including industry, in the development of linked courses.

KEY ISSUES

- *The balance and relationships between a general education for the individual and vocational training for industry.*
- *Need for post-compulsory schooling to be relevant to all students not just the academically elite.*
- *Need for industry to be involved in the development of schools/TAFE linked courses.*

Questionnaire for curriculum officers

Senior curriculum officers in each State/Territory each were sent three questionnaires which they were asked to pass on to the senior staff responsible for curriculum in program areas up to Stream 3300 level in Business Studies, Electrical Engineering and Hospitality in their TAFE agency. Of the possible 22 replies, 19 were received. Each TAFE agency was represented. The distribution by subject area was:

Business studies - 5
Electrical Engineering - 6
Hospitality - 7
All three areas - 1

The questionnaire is reproduced in Appendix 2.

The curriculum officers were asked for background information such as their location and subject area, as well as the following questions:

- *What, if any, changes have been made to TAFE curricula as a result of the increased retention levels in senior secondary schools?*

Twelve respondents said 'none' or 'almost none'. Clearly the increased retention rates are only beginning to have an impact on TAFE curricula in most agencies. However, plans for responding to increased retention are in existence in all TAFE authorities.

Those responses which provided details have been included in the summaries of activities in each TAFE agency, in Appendix 4. The responses referred to dual accreditation, 'fast tracking' of students with relevant Year 12 subjects, increased intake of students into Associate Diploma courses and plans for future credit arrangements. One respondent stressed the need for TAFE to ensure that the practical content of TAFE courses compensates for any shortcomings in school facilities.

- *What, if any, curricula changes do you anticipate will be made in your program over the next five years given the anticipated greatly increased senior secondary school retention rates?*

Respondents anticipated:

- a general rise in the standards of TAFE courses - fewer basic subjects;
- increased articulation and credit from Year 12 to TAFE;

- an increase in national core curricula;

- more flexible modularised courses and self-paced learning;

- students will reduce their TAFE fees by selecting school subjects which earn credit at TAFE - the first part of certain TAFE courses may, in the future, normally be taught in schools.

- *Is some form of credit given for study in Years 11 and 12 in any of your courses?*

Sixteen respondents said 'yes', two said 'no' and one said this is currently under consideration. Clearly the tendency in TAFE is to provide credit for relevant senior secondary subjects.

Of those who said 'yes', credit was given on the basis of school certificates. Only three respondents indicated that credit is also given on the basis of some form of competency test. This indicates that competency testing as a measure of prior learning is not yet used extensively in TAFE.

The results of the questionnaires indicate that TAFE generally is only beginning to adjust to increasing school retention rates (except in the ACT where there have been very high retention rates over the last decade). However, all States and Territories are adapting or planning adaptations to this change in ways which reflect TAFE's increasing commitment to competency-based learning, recognition of prior learning, individualised and self-paced instruction and articulation with schools and higher education.

Further changes are likely to be made over the next five years. The opinions of this small sample of experts can be contrasted with the larger sample of senior lecturers below.

Questionnaire for senior college lecturers

All directors of TAFE colleges in each State/Territory were sent three reply-paid questionnaires. A copy is shown in Appendix 3.

The directors were asked to pass these on to the most senior of their lecturing staff who taught courses which included school leavers, in each of the selected areas. The potential number of respondents was 422. Two hundred and fifty two responses were received, giving a response rate of 60%. The distribution of respondents, by State and program is shown in Table 7.1

TABLE 7:1

DISTRIBUTION OF RESPONDENTS TO SENIOR LECTURERS' QUESTIONNAIRE BY STATE AND PROGRAM 1991				
	Business Studies	Electrical Engineering	Hospitality	Total
New South Wales	39	14	26	79
Victoria	36	11	12	59
Queensland	26	9	11	46
Western Australia	13	4	10	27
South Australia	17	2	4	23
Tasmania	2	4	1	7
Northern Territory	2	2	2	6
Australian Capital Territory	3	1	1	5
TOTAL	138	47	67	252

This moderate to high response rate and balanced distribution indicates that the responses can be considered representative of the different States and Territories. This representativeness is also indicated by the fact that 155 responses were from urban colleges (defined as within the metropolitan areas of the capital cities and of Geelong, Gold Coast, Newcastle and Wollongong) and 97 were from rural colleges, see Table 7.2.

TABLE 7:2

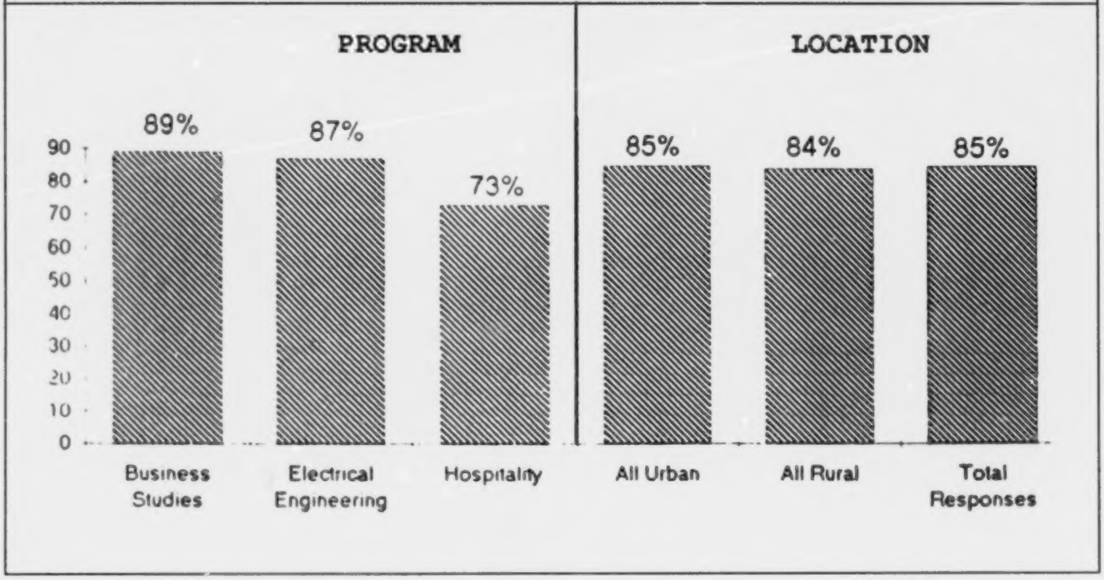
RESPONDENTS TO SENIOR LECTURERS' QUESTIONNAIRE RURAL X URBAN X STATE/TERRITORY 1991			
	Urban	Rural	Total
New South Wales	40	39	79
Victoria	42	17	59
Queensland	23	23	46
Western Australia	20	7	27
South Australia	16	7	23
Tasmania	5	2	7
Northern Territory	4	2	6
Australian Capital Territory	5	0	5
Total	155	97	252

After determining this background information, the questionnaires asked about retention to Year 12. The questions were:

- *Compared with five years ago, has there been a change in the proportion of your students who have completed Year 12?*

Figure 7.1 illustrates the responses by program, State/Territory and location, as a proportion of those who replied to this question.

FIGURE 7:1



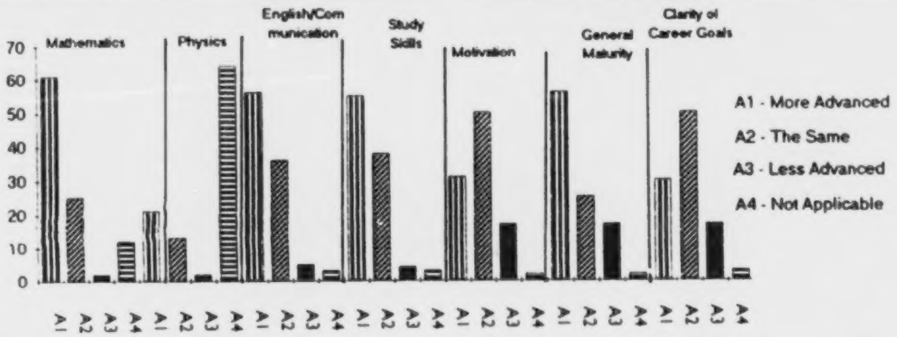
PERCENTAGE OF THOSE WHO REPLIED INDICATING AN INCREASE OVER THE PAST FIVE YEARS, OF STUDENTS COMPLETING YEAR 12

This indicates that an increase in retention to Year 12 has occurred in all three areas as well as in both urban and rural areas.

- *How do those students who have remained at school longer compare with other students in the same class.*

FIGURE 7:2

PERCENTAGES OF RESPONDENTS, BY RESPONSE, FOR DIFFERENT SKILLS HELD BY TAFE STUDENTS WHO COMPLETED YEAR 12 COMPARED WITH THOSE WHO LEFT SCHOOL EARLY



Only in physics was it generally felt that a comparison was not applicable between those who persisted to Year 12 and those who left school earlier. In motivation and clarity of career goals, half the respondents considered there was no significant difference between persisters to Year 12 and others. However, for both issues, approximately 30% considered persisters were more advanced, while 17% considered they were less. Overall, on these two issues, 80% of the respondents believed that remaining to Year 12 has a neutral or positive effect.

In each of the other specified areas the bracketed statistics shown below are the percentages that considered Year 12 persisters were more advanced than other students in the same TAFE courses:

- mathematics (61%);
- English/communication (56%);
- study skills (55%); and
- general maturity (56%).

One respondent summed up:

> Overall, the Year 12 entry level has given us a better quality student.

However, not all students benefit from remaining at school to Year 12. The questionnaire asked:

- *Do you consider that the longer period at school has had the effect of alienating some of your students?*

Twenty three percent of respondents answered 'yes'. While this is a minority, it is big enough to be of concern. Being too young to receive unemployment benefits, some young people who cannot obtain work are remaining at school to gain Austudy rather than for educational motives.

This view was expressed forcefully by one respondent:

> Most only stay at school because they can't get unemployment benefits - NOT to learn.

Another has found such students are:

> Not prepared to put effort into study, argue/question/criticise decisions made by senior staff regarding their education.

By the time they reach TAFE some of these students have developed negative attitudes to learning which can handicap their progress. It is important that TAFE curricula responds to this, for example, by emphasising hands-on experience and alternative learning styles so that such students can recognise that TAFE provides a more adult, vocationally relevant education than do schools.

The senior lecturers' responses show that there are changes in students who persist to Year 12. They were asked:

- *Have any modifications been made to the program as a result of retention to Year 12?*

The responses to this question are given in Table 7.3.

TABLE 7:3

PERCENTAGES OF RESPONDENTS REPORTING MODIFICATIONS TO THE PROGRAM AS A RESULT OF RETENTION TO YEAR 12, BY PROGRAM AND LOCATION

	All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
Modifications	37	46	54	35	17	41

The limited extent to which programs have been modified is surprising given the fact that in all three programs there had been considerable increases in the numbers of students completing Year 12 over the past five years (see Table 7.3 above). Clearly the curricula have not as yet been modified to reflect these changes. As is inevitable, there is a time gap between what is occurring and TAFE's response to this. However, as Chapter 5 indicates, curricula changes are occurring or being planned in all TAFE agencies in response to increased retention to Year 12.

Typical comments made by respondents were:

> There has been a shift in the general level of knowledge and awareness of entry students which has meant that type of material presented has changed, e.g. more abstract. The continued participation of pre-year 12s in the same classes has muddied the waters somewhat.

> The first stage was compacted into a semester rather than completed over a year.
>
> Movement away from lock-step method to self-paced competency-based modules.
>
> Within basic computer classes, extension work has had to be developed and given to maintain the motivation. Syllabuses haven't made any modifications.
>
> Program has been upgraded - made more challenging.
>
> Some Year 12 students have better study skills, more general knowledge, more likely to have had part-time work. Consequently, teaching can be pitched at a higher level for these. Others, even though Year 12, are no better than Year 10 leavers and have to be treated accordingly.

The next question was:

- *Have any changes been made in the overall teaching methodology in response to students' longer schooling?*

Respondents were asked to indicate whether changes had been made in several different aspects of their teaching. Their responses are shown below in Table 7.4.

TABLE 7:4

PERCENTAGES OF RESPONDENTS REPORTING CHANGES IN TEACHING METHOD BY PROGRAM AND LOCATION

	All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
More self-paced	20	38	33	13	24	27
More independent learning	46	60	55	43	52	52
Higher literacy level	24	27	28	17	25	25
Emphasis on students' own research	37	45	41	23	51	40

The trends in Table 7.4 are similar for all programs and both locations. The greatest change in teaching methodology is in a greater emphasis on the students as independent learners, than on the student conducting his/her own research.

One respondent summed up the changes:

> More reliance on pre-requisite skills being adequate.
> More reliance on independent study being completed.

Generally there is more self-paced learning, except in electrical engineering where this is restricted by apprenticeship regulations. The extra years students have spent at school have only led to moderate increases in their literacy level when undertaking TAFE courses, with only 25% of respondents reporting a change in this area. This is surprising as Table 7.4 above shows that 56% of the lecturers surveyed considered that students who have persisted to Year 12 have higher English/comprehension skills than non-persisters.

Respondents gave a similar response rate (55%) for increased study skills in Year 12 persisters (Figure 7.2) and this is reflected in the responses in Table 7.4 where independent learning and students undertaking their own research are encouraged as more Year 12 persisters enrol.

It is interesting to note that in all aspects of teaching considered, rural lecturers reported a greater rate of change in teaching methodology than their urban counterparts. (The statistics were significant at the 5% level of significance or better for more self-paced and more independent learning.) This is despite the fact that Year 12 completion rates for rural students are significantly lower than for urban students (49.5% as opposed to 61.3%, see Table 4.3 above).

However it is possible that many urban lecturers may have been using more modern teaching methodology than their rural counterparts as they have better access to professional development. So urban lecturers therefore may have needed less change to achieve the same results. There was no significant difference between the percentage of urban and rural lecturers who indicated an increase over the past five years of students completing Year 12 (Figure 7.1 above).

- *Have you found it necessary to provide special support to those students who have not completed Year 12?*

The responses to this question are shown in Table 7.5 below.

TABLE 7:5

PERCENTAGES OF RESPONDENTS REPORTING A NEED FOR SPECIAL SUPPORT FOR NON-PERSISTERS TO YEAR 12

All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
45	58	42	64	58	50

It may be that the higher rate of support needed by electrical engineering students who are not Year 12 persisters reflects the fact that a greater percentage nationally of students in this program would have Year 12 than in the other two programs.

Typical comments on this question were:

> It should be noted that some Year 12 students also receive assistance. Year 12 doesn't mean excellence.

To some students, not all.

The next question was:

- *What effect have greater retention rates had on the entry requirements for courses in your area?*

The responses to this are shown in Table 7.6 below.

TABLE 7:6

CHANGES TO ENTRY REQUIREMENTS, BY LOCATION AND PROGRAM						
	All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
No change	42	47	38	48	53	44
No official change but preference for higher educational levels	39	30	36	33	37	35
Higher levels officially required	19	23	26	20	10	21

Clearly, for most programs there has been no official change in selection policy in response to the increasing numbers of Year 12 persisters. However in all three areas some colleges are requiring higher academic levels in applicants than previously, particularly in business studies and hospitality. Electrical engineering traditionally has had more Year 12 persisters than the other areas.
Several interviewees commented:

> TAFE tends to pick up the remnants after universities have had first choice.

The next question was:

- *Given predicted increased school retention rates, do you consider that it would be appropriate to make changes to existing curricula?*

The responses to this are shown in Table 7.7 below.

TABLE 7:7

PERCENTAGE OF RESPONDENTS FAVOURING CHANGES TO EXISTING CURRICULA BY LOCATION AND PROGRAM						
	All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
Yes	49	48	47	50	52	49
In content	81	91	83	86	87	85
In teaching methodology	71	62	67	68	74	68

The responses to this question were remarkably similar across the three program areas and urban/rural, and were evenly divided as to whether changes should be made. Of those who considered changes should be made, there was support for changing teaching methodologies and very strong support for changes in content in response to increased retention rates.

Typical comments were:

> It is essential to keep upgrading curricula to maintain industry standards, not for school retention rates.
>
> It would be inconsistent with the 'open door' policy of our courses.
>
> Few have taken subjects applicable to this industry to Year 12. For those that have, their knowledge is academic, not practically based.
>
> Yes, omit areas where articulation can occur, provide credit for work already done.
>
> More work experience/research projects.
>
> More tutorial and practical work - less normal lecturing.

The next question was:

- *As more students complete secondary school how should TAFE respond to those students who leave before Year 11 (early school leavers)?*

The responses to this question are shown in Table 7.8 below.

TABLE 7:8

TAFE'S RESPONSE TO EARLY SCHOOL LEAVERS

	All Urban	All Rural	Business Studies	Electrical Engineering	Hospitality	TOTAL
Bridging courses	72	83	79	78	86	81
Extra support as needed	76	89	82	77	82	81
Raise entry requirements to exclude	10	5	7	10	7	8
Accept without special provision	34	32	33	27	40	34

The response to this question indicates very strong support in TAFE for allowing early school leavers to continue to enter those courses which traditionally have catered for them. A strong majority believed bridging courses should be available before students begin in TAFE and that extra support should be available as required.

Not all respondents answered every item in this question and the percentages given are for those who answered each item.

Hence the 34% total in favour of accepting early school leavers without special provision is not inconsistent with the 81% favouring bridging courses and extra support.

The 'upward academic drift' noted earlier in Chapter 3, whereby educational organisations are increasingly in competition for the best students, is not reflected in these responses. Only 8% of the senior lecturing staff surveyed believed that entry requirements for these courses should be raised to exclude early school leavers.

Some of the varied responses to this question were:

> Yes (possibly) teach same content over different time-frame and with more tutorial support.
>
> They should be supported with bridging courses especially in maths and literacy skills.
>
> It appears that students who traditionally entered our courses from both Year 10 and Year 12 are now being offered places at universities/CAEs. Many students now entering our courses would not have done so five years ago, and do not seem to have the study skills/motivation.
>
> If advantage is to be taken of students' extra education, the entry requirements would need to be raised, but this would probably exclude many Year 10 leavers.

- *Have increased school retention rates had any effect upon the access and/or performance of students from any of the following groups?*

The responses to this are shown in Tables 7.9 and 7.10 below.

TABLE 7:9

LECTURERS' PERCEPTIONS OF THE EFFECT OF INCREASED SCHOOL RETENTION ON ACCESS OF SPECIFIC SUBGROUPS - BY LOCATION

	Better		Same		Worse		Do not know	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Aboriginal students	4	8	21	48	3	1	73	43
Non-English speaking background students	20	10	46	47	6	4	28	39
Girls in non-traditional areas	23	24	38	45	0	0	39	36
Rural students	9	16	35	64	0	5	57	15
Early school leavers (leaving before Year 11)	3	6	38	52	28	30	31	13

The results show that increased school retention is not having a very strong effect on these subgroups' access to TAFE. It is, to a small degree, assisting non-English speaking background students (in urban areas) and girls moving into non-traditional areas. It appears, again to a limited extent, to be making access more difficult for early school leavers.

The concerns of a number of respondants are reflected in the comments provided:

> Greater competition is forcing them out.
>
> As level of class rises and teacher pitches lesson higher NESB and early leavers struggle.

Table 7:10

LECTURERS' PERCEPTIONS OF THE EFFECT OF INCREASED SCHOOL RETENTION ON PERFORMANCE OF SPECIFIC SUBGROUPS - BY LOCATION

	Better		Same		Worse		Do not know	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Aboriginal students	5	7	18	45	1	2	76	45
Non-English speaking background students	27	16	39	40	7	4	27	40
Girls in non-traditional areas	26	19	30	45	3	0	41	36
Rural students	10	20	29	60	1	2	60	18
Early school leavers	8	5	40	60	16	19	36	16

Lecturers' perceptions of the effect of increased school retention on the performance of the specified subgroups (shown in Table 7.10) is very similar to their perceptions of the subgroup's access. No very strong trends are indicated but it appears that non-English speaking background students and girls in non-traditional areas (particularly in urban areas) are performing better, as are rural students in country colleges. Early school leavers are not performing as well as before, in comparison with the whole class.

KEY ISSUES

- *Increased retention rates are only beginning to impact on TAFE curricula except in the ACT where higher retention rates have existed over the last decade.*

- *Curriculum officers anticipate:*

  - *a general rise in the standards of TAFE courses;*

  - *increased articulation and credit from Year 12 to TAFE;*

  - *an increase in national core curricula;*

  - *more flexible modularised courses and self-paced learning;*

  - *the first part of some TAFE courses may normally be taught in schools.*

- *This is a growing tendency in TAFE to provide credit for relevant senior secondary subjects. However, credit is rarely given, as yet, on the basis of competency tests.*

- *All TAFE agencies are adapting, or planning adaptations, to increased senior secondary retention. These changes will reflect TAFE's increasing commitment to competency-based learning, recognition of prior learning, individualised and self-paced instruction and articulation with schools and higher education.*

- *Only 30% of senior lecturers surveyed considered Year 12 persisters had stronger motivation and clearer career goals than earlier school leavers. In mathematics, English/communication, study skills and general maturity, slightly over half considered those students with Year 12 were more advanced.*

- *Nearly a quarter of teachers considered that the longer period at school had alienated some students.*

- *Only a minority of programs have been modified in response to increased numbers of students with Year 12. Of these changes, most were to allow for more independent learning. Forty percent also said there was increased emphasis on the student's own research.*

KEY ISSUES CONTD.

- *44% of teachers stated there was no change in the student selection requirements for courses; 35% admitted that, in practice, although not officially, a preference exists for higher educational levels; 21% commented that higher levels are now officially required.*
- *Slightly less than half the respondents considered changes should be made to existing curricula in response to increased school retention rates. Of those favouring change most considered changes should be made in teaching methodology, and an even greater number favoured changes in content.*
- *There was very strong support for allowing early school leavers to continue to enter those courses which traditionally have catered for them. Special support, as needed, was strongly advocated.*
- *Most lecturers are not as yet aware of any significant effects of increased school retention rates on the access or performance of sub-groups (Aboriginal students, non-English background students, girls in non-traditional areas, rural students and early school leavers).*

CHAPTER 8 OVERSEAS EXAMPLES

International comparisons are useful since they have the potential to highlight common problems which may elicit very different solutions resulting from the different organisations, relationships, values and cultures of different countries. Thus they show alternative perspectives or strategies which may be adapted to our own situation, and suggest some general principles potentially applicable to our specific circumstances.

However some scepticism is advisable when international comparisons are made. The statistics compared may not be collected on the same basis and the same terminology may not, in fact, reflect exactly the same thing. The following discussion should, therefore be treated somewhat cautiously.

While Australia's level of participation in post-compulsory education is rising, it is still only in the average to low-average range compared with other OECD countries. Australia has the lowest proportion of students in immediate post-compulsory years in vocational or technical programs of any OECD country except Greece.

Female enrolments in post-school vocational courses, as a percentage of male enrolments, are very low compared with other OECD countries. Thus, in Australia, Sweet (1988) noted, the problem in post-compulsory education relates more to the nature and distribution of places available and less to the absolute number of places.

In European countries after a compulsory period of general education which usually lasts nine or ten years, vocational education is usually provided through:

- *school-based technical/vocational education*: in the vocational high school or the technical 'lycee' on a full-time basis. Students' progress is structured in years as in a general high school. The end result is a technical diploma that is usually distinct from the general diploma;
- *linked work and training systems*: combining learning on-the-job, in company training centres and in educational institutions. Apprenticeship is the oldest form of linked work and training and is currently enjoying a certain revival of interest, while new forms of linked training are also being developed;
- *'post-school' training schemes*: over the last decade, various versions of this have emerged to ease the transition between full-time school and work during a period of high youth unemployment. It is not yet clear whether schemes which stress on-the-job learning are going to be a permanent part of vocational provision and what their role and position in the system will be (Jallade 1989).

The choices made by each country regarding the organisation of vocational education largely depend upon political, economic and social factors peculiar to each.

Vocational education in most countries is part of a broader process of gradually widening choice in general education, albeit being carried out in very different ways. Greater diversity may be offered earlier or later, in a flexible or rigidly structured fashion and/or through curriculum contents, institutions or qualifications.

Germany has the most highly developed linked work and training in Europe. It is also the richest economy in Europe, with low inflation, high growth and strong exports.

Young Germans remain in either school or vocational training until they are 19. This means that virtually every German is skilled with either a degree or skilled tradesperson certificate. It also means almost no unemployment at this age. This vocational training, which involves two thirds of 16-18 years olds, is known at the dual system. It is largely independent of the secondary schools and consists of three years of rigorous on-the-job training.

At the same time, the apprentices receive theoretical education and acquire specific occupational skills through part-time attendance at *Berufsschulen* (trade school) one or two days per week. The dual system's popularity is based on its provision for both access to higher level technical qualifications and re-entry to the educational system. The key element in the dual system is the firm which takes on the apprentices and trains them in special training schools or on-the-job for three or four days per week for three years. The position of the firm is further strengthened because industry and unions play a very significant part in shaping the contents of the training and are virtually the sole examiners in the final assessment. Firms receive government incentives to take on far more apprentices than they will ultimately require. As well there are school-based, full-time vocational courses which are growing in importance.

The curriculum content of the dual system is largely determined by public authorities, professional groups, education authorities, employers and employees. The award, the *Facharbeiter*, not only certifies (recognises the knowledge and skills of its holder) but qualifies (recognises the specific grade in the wage scale accepted by both employers and employees). This gives this award status in the community.

Because of the dual system's comprehensiveness there is virtually no post-school, non-apprenticeship vocational training, apart from a few programs for ethnic minorities and the handicapped. The German authorities have preferred to put pressure on firms to increase the number of apprentices well beyond their real needs rather than introducing new training initiatives requiring entirely new arrangements (Jallade 1989).

Unemployment among 19 to 24 year olds, in contrast, is substantial. However, this system has the advantage of providing a trained workforce which can be drawn upon, with appropriate further training if needed, when employment opportunities increase.

In the **United Kingdom** in 1976 nearly 70% of 16 year olds went straight from school to work, whereas in 1986 only about 10% did this, largely because of the decreasing number of jobs for early school leavers. Government policy is to provide young people with vocational education:

> The U.K. should aim to enable at least 80% of young people to enter the labour market with a qualification relevant to their employment - this would mean withdrawing 16- and 17-year olds from the labour market, as is done in the other three countries (viz U.S.A., West Germany, and Japan).
> (Institute of Manpower Studies 1989, p.7)

Both schools and colleges in the UK are seeking a more coherent progression from school to college to working life. To achieve this many schools and colleges now provide 'records of achievement' or 'profiles' to give students, their potential employers and other educational establishments a fuller picture of their experiences and achievements.

The Further Education Unit (1988) considers that a useful step forward would be the development of a more consistent system of 'profiling'. It stresses the importance of continuity rather than repetition of learning with respect to the 14-19 age group and the need for colleges and schools to form joint planning groups for their shared and successive provision.

As in Australia, link courses in the UK have enabled many senior school students to experience the more adult atmosphere of the college, become familiar with the broader range of equipment generally available in colleges, or widen their curriculum into areas not offered in their school. Work experience is also an area in which co-operative planning can occur between schools and colleges.

Co-operation often occurs through the provision of link courses for school pupils, for planned progression into the college at 16+, and through 'consortium arrangements' by which the school and college share provision and support for the student.

The Technical and Vocational Education Initiative (TVEI) has been conducted in the UK since 1983. It consists of a series of programs involving groups of secondary schools, with students aged fourteen to sixteen, and colleges of further education, with students aged sixteen to eighteen. As well as general education, most TVEI programs include technology courses (such as information technology), computing, food and catering, electronics and business skills. These programs also aim to develop personal and social skills and provide career and work experience.

These programs are linked to future training or vocational opportunities and are responsive to local and national changes in employment opportunities.

Unlike Australian linked schemes, where all costs must be met by schools and/or TAFE, TVEI has special arrangements and all extra costs arising from the program are met by the Training Agency, an independent government organisation.

An important feature is that this funding allows for the in-service professional development of both school and TAFE teachers who are involved in the program. In the Australian context similar special funding provision would assist TAFE/schools linked programs and help prevent conflicts arising between the two sectors involved.

Students are assessed continuously and also at the end of their courses with records of achievement (profiles) being developed over the whole course. The courses lead to nationally recognised qualifications such as the General Certificate of Secondary Education and the Certificate of Pre-vocational Education.

The Certificate of Pre-vocational Education (CPVE) is designed for students over sixteen who wish to remain at school but do not wish to study tertiary entrance subjects. CPVE is a framework consisting of one core, two vocational studies and three additional studies. These are co-ordinated to form a coherent whole rather than separate subjects, and the aim is to produce integrated learning. The three additional studies must not total more than 25% of the program time.

Again, assessment is continuous and a portfolio is developed of each student's learning experiences. It provides credit for entry into further education courses.

In recent years there has been an increased emphasis on the planning of school and FE provision in response to educational, demographic and economic factors, and has led to changes in both the organisational structure and the curricular range of FE colleges. A number of college re-organisations and amalgamations have occurred and the tertiary colleges have been created by merging school sixth forms and FE colleges, whose aim is to provide a wider and more co-ordinated range of options for students who wish to continue their education beyond the compulsory school-leaving age.

The Scottish National Certificate was introduced in 1984 to combine educational and industrial training perspectives and to make the process of certification more flexible in order to meet the needs of employers and students. It may be undertaken at school and/or full-time or part-time at a college of further education.

The program is very flexible - students may take as many subjects as they require and from different areas and build upon them later. The course is made up of self-paced modules which include a precise statement of the standards to be achieved.

Assessment is carried out on actual production machinery and equipment under full commercial conditions in the workplace.

This gives the National Certificate credibility among industry.

(Crawford 1990)

Learning Outcomes (the standards) which were developed by industry are issued with the National Certificate. The certificate is designed to inform employers and other interested people precisely what practical and cognitive competencies have been gained. It counts towards higher education entrance and to the advanced examinations of some professional bodies.

The Scottish Vocational Council (SCOTVEC) designs and develops the modules and their standards. It validates the centres where the program will be presented in terms of staff and resources, and provides SCOTVEC external moderators and subject assessors.

If Australia adopted such a model then a single post-compulsory schooling certificate would exist common across both secondary schools and TAFE colleges to replace the present separation of credentials. More flexible and diverse patterns of attendance could be accommodated whereby students could undertake school and TAFE courses over a period of two or three years to gain an educational award with recognised links to both higher education and the labour market.

In the **United States**, traditionally, vocational education has been offered from Years 9 to 12 and then linked with community colleges, providing courses similar to those offered by Technical and Further Education in Australia.

The re-authorised Perkins Act of 1991 authorises the US Government to spend up to $US125 million to fund school/community college co-operative technical preparatory programs in the 1991/1992 financial year.

United States legislation does not mention credit or advanced standing in post-secondary institutions for courses taken at school. Instead it speaks of a common core of required proficiency in mathematics, science and communications technologies. American educationalists such as Wirt (1991) recognise that finding ways to provide such credit is crucial if vocational education is to gain status in the community.

Approximately 9.3 million students follow some form of vocational education in US secondary schools. Usually it is the non-academic students who follow a vocational track in high school (as opposed to an academic or general track). However, students from other tracks may take one or two vocational courses. Although 20% of these students drop out before completing their courses, (as opposed to 6% in academic and 17% in general tracks), vocational courses appear to be successful in retaining a significant number of students who might otherwise have dropped out.

The 'reform movement' in US education argues that this pattern of vocational education is no longer appropriate because the nature of industries is changing so rapidly and also because students will, on average, change their careers three or four times during their working lives. Lambert (1988) points out that there is considerable resistance from American vocational teachers to attempts to provide generic or pre-vocational type courses. The American Vocational Association is a very powerful lobby group and has recently secured the continuation of Federal funding for specific vocational education.

As with Australia, there are increasing problems with the provision of equipment for vocational education in United States schools. Because technology changes so rapidly it is very difficult for schools to keep up-to-date. Links are being established between schools and business to overcome this problem. Business however appears to maintain a better relationship with community colleges than with high schools. This is similar to the Australian situation where TAFE tends to have better equipment, more technically trained teachers, and stronger links with industry than do schools. This means that TAFE agencies are concerned to ensure that schools meet their standards if joint accreditation is to be given. Ways in which this has been done are described in Chapter 6.

As with other forms of education, the quality of vocational education varies according to the affluence of the school. There are enormous inequities between affluent suburban high schools and less affluent inner-city or rural high schools. Affluent schools are far more able to provide up-to-date equipment for vocational training, better trained vocational teachers and reasonable access for students to counsellors than are poor schools. The result is that those in less affluent schools have fewer opportunities than those in schools which have many resources committed to vocational education.

Vocational education is provided in a variety of ways across the nation. In some cases it is provided in the 70 skills centres which operate by temporarily withdrawing students from local high schools. These centres are themselves 'at risk' if the local high schools are not supportive. It seems that to succeed they require outstanding staff.

There are a number of major problems associated with skills centres. Like schools, skills centres are plagued by the problem of rapidly outmoded plant and equipment. Students are 'bussed in', rather than having access to vocational education at their local school. This means they lose access to extra curricula and other social activities at their home school - activities that integrate students across curricular and ability levels. Skills centres predetermine students' education, limiting their post-school options and their opportunities for academic success.

The Tech Prep programs are more successful. These combine two years of technology-oriented preparatory education in high school with two years of advanced technology studies at a community college. Wilcox (1991) reports that many American educators consider Tech Prep one of the most effective ways of creating the well-qualified corps of technological workers their country needs to compete internationally. Results have been impressive, with higher school graduation scores and lower drop-out rates and increased community college enrolments.

Community colleges offer two-year post-secondary vocational education to almost everyone who wishes to enrol. Although these colleges (over 700 throughout the US) are often accessible and federal fee relief is available to disadvantaged students, they lack credibility as employers view their programs as insufficiently extensive or thorough.

In **Japan** as in the USA, there are some vocational courses in a few conventional senior high schools. The content of the courses is not strongly vocational and no separate certificate awarded. Vocational courses can also be taken in some general high schools. In Japan there are a number of five-year technical colleges. In both countries, vocational education is widely available only at post-secondary level, through a highly developed system of junior colleges which are separate from the four-year universities..

Enrolments in the vocational lines of Japanese high schools stood at 28% of all enrolments in 1985 as against 40% in 1965, and only 16% of all Japanese high schools can be considered 'vocational'. Despite government regulations requiring that half of the teaching time be devoted to vocational subjects, the tendency is clearly to strengthen general subjects. Thus, the so-called vocational high schools are less and less 'vocational' and they rank far behind general high schools on the prestige scale of the Japanese middle class. (Jallade (1989).

This is very similar to the situation in Australia where technical high schools were largely replaced by general high schools during the 1980s. Unlike Japan, Australia is now slowly reintroducing technical high schools in some States.

Community attitudes to vocational education are also similar in Australia and Japan with 'academic' studies having higher status. In both countries this frequently leads students to undertake such courses, even when they have very little likelihood of achieving university entrance. The need to raise the perceived value of vocational studies is pressing and will be a significant aspect of Australian school/TAFE links.

In Japan linked work and training do not exist in schools. There is a sharp division between schools, which provide general education and employers, who provide initial and continuing vocational training for their workforce. School leaving qualifications are merely the basis for the subsequent training. This has led firms to develop substantial training programs which are broader than the firm's own needs. It is worthwhile for firms to provide this training due to the system of lifetime employment with the same firm. As well, there are many private specialised vocational schools which link general high schools and the in-house training given by employers, but they do not offer linked work and training.

Japanese vocational training is provided in two ways. One is through vocational schools which are closely linked to, and often supported and managed by, industry. The other is through two-year colleges which enrol mostly girls. These colleges offer a narrow, traditional choice of courses and are often of poor quality.

This reflects the Australian findings of Pocock (1987) that women tend to be enrolled in a narrow range of traditional courses within TAFE and that, on a per capita basis, these receive very much less funding than male dominated programs. Table 3.7 above shows that only 12% of apprenticeships are taken by women. Of these the overwhelming majority are in hairdressing which is the most poorly resourced apprenticeship on a per capita basis. Yet apprenticeships are the best resourced of TAFE vocational preparation courses, are of the longest duration (3 to 4 years as opposed to ATS which is usually one year) and have higher community status.

In both Australia and Japan this situation reflects a deep, underlying stereotypical bias, which has resulted in women's segregation into poorly paid, limited careers. This can be contrasted with the situation in Sweden where women enjoy equal provision in vocational training and a much more equal role in all levels of the workforce. Clearly, efforts to improve the links between secondary school and TAFE must ensure that the long-term needs of women and girls are catered for as fully as those of males.

Sweden is generally acknowledged to be a world leader in post-compulsory schooling. More than 90% of Swedish students continue beyond compulsory schooling (16 years plus). They may select to do academic or vocational studies and approximately 50% do each. However, each aims to prepare students for further study as well as providing some vocational preparation.

Swedish upper secondary schools do not have external examinations and vocational education programs provide the same access to higher education as do academic studies. Standards are monitored by centrally compiled and co-ordinated tests in some subjects and panels of visiting experts. This leads to complexity and expense and many Swedish teachers consider external examinations would be simpler to administer, more valid, and fairer (Parker 1990).

The curriculum structure for vocational subjects involves a division of the syllabi into modules, with the system as a whole designed to be viable in upper secondary school, municipal adult education and labour market programs. This means that students who do not complete certain modules during their upper secondary schooling have the opportunity to complete them later in other educational contexts.

Swedish non-apprenticeship vocational training is intended to give a second chance to those who have dropped out of the education system. To be truly equivalent to school-based education it must provide the same access to higher education. Swedish municipalities provide a wide range of such courses for adults.

In the area of private expenditure on education by industry, Sweden is far ahead of Australia. Unlike Australian industry, Swedish industry is very much involved in the development and delivery of vocational courses at the post-compulsory level. Employers and trade unions both contribute substantially to curriculum, particularly in syllabus development and in providing training through work experience (which can be up to 60% of the students' time).

The government funds short, voluntary training courses for industry staff involved in the vocational courses, and industry gives them paid release to attend. These courses are run by higher education teacher training providers and include teaching and management skills. Industry staff are given assistance in co-ordinating their work with the students' needs. At the end of the course a transportable credential as a trainer is provided. Such a program could be introduced in Australia to help co-ordinate on- and off-the-job training and assessment.

This system requires a considerable contribution from industry, which Swedish firms are willing to make because of the perceived benefits. The provision of a higher education award gives recognition and credibility to those undertaking it. Swedish employees who have completed such a course have benefited by improved morale and self-esteem (Parker 1990), while the resultant more highly skilled recruits with work experience are valued by industry.

In Australia, work experience programs are often limited in their effectiveness as employers tend to know little about the school curriculum and the ways in which work experience could contribute to this. Neither they, nor the students' workplace supervisors, are likely to have any training in teaching young people. Very often the work experience is limited to a restricted range of elementary skills. Considerable benefit could be gained in Australia if the Swedish idea of training industry trainers were adopted.

KEY ISSUES

- *While Australia's participation in post-compulsory education is increasing, compared with other OECD countries it is still only in the average to low-average range.*

- *In most countries vocational education is part of a broader process of gradually widening choice in general education. Schools/TAFE linked courses are one way in which Australia is extending this choice.*

- *In Germany, which has the richest economy of the larger countries in Europe, all young people remain in general or vocational education until they are 19. Hence there is a more highly skilled workforce and no unemployment in this age group. Apprenticeships have parity of esteem with academic studies. Industries are government subsidised to employ more apprentices than they require. Extensive articulation occurs between apprenticeship programs, education systems and higher level technical education.*

- *In England there is high youth unemployment. Schools and further education (FE) linked courses are being developed including the Technical and Vocational Education Initiative (TVEI). This is funded independently of both schools and further education thus avoiding some of the financial problems occurring in Australia. Assessment is continuous and individual student achievement profiles are recognised qualifications. Some FE colleges and schools have been merged to co-ordinate options for students.*

- *In Scotland the system is very flexible, with self-paced modules and precisely defined standards.*

- *In the United States articulation occurs through a common core of required proficiency in specialised subjects. Generally, vocational education is studied by less academic students and efforts are being made to provide more general vocational education for all ability levels.*

- *In Japan vocational education is not widely available until the post-secondary level, and at schools it has low prestige. At the post-secondary level vocational education is provided extensively by junior colleges, private colleges and by employers who provide broad training programs in their own premises or support the colleges.*

KEY ISSUES CONTD.

Girls tend to undertake narrower courses at poorer quality colleges. As in Australia women tend to be segregated into poorer paid jobs.

- *In Sweden over 90% of students continue beyond compulsory education, of these about 50% do vocational studies. These articulate with higher education. Vocational studies have parity with academic studies for entrance into higher education. Swedish industry (employers and unions) is very much involved in the development and delivery of post-compulsory vocational courses.*

The growing retention rates in senior secondary schools are affecting TAFE curricula and all TAFE systems are currently preparing their curricula responses to increased school retention. Some of these changes are causing some concerns but most can be seen as positive, and as contributing to the general responsiveness of TAFE to its clients.

Disadvantaged groups

Concerns expressed by lecturers and curriculum developers are that TAFE's traditional clientele for many entry level courses, Year 10 school leavers, may be disadvantaged either in selection (as competition for places may lead to higher academic credentials being required), or in the course itself (as classes fill with students with increased schooling, the level and methods of teaching may change-in ways which are not appropriate for early school leavers).

A slight majority of lecturers (56%) indicated that higher educational levels are now being used in selection for entry level courses, although only 8% favoured raising entry requirements to exclude early school leavers. So although the vast majority of lecturers would not automatically exclude such people, it is nevertheless a factor considered in selection. This can be linked with the lecturers' perceptions of the effect of increased school retention on access to TAFE of specific sub-groups: no strong changes were indicated although some trends were apparent. (See Tables 7.9 and 7.10.) Twenty percent of urban lecturers considered that access for non-English speaking background students had improved (generally this was because the extra years at school had given these students a longer time to learn English).

Over 20% of lecturers considered that girls' access to non-traditional areas had improved and none thought it was worse. (The reason usually given was the increased confidence and maturing in the girls as they grew older.) Sixteen percent of rural lecturers considered that the access of rural students was improved and only five percent thought it had worsened.

Twenty eight percent of urban lecturers and thirty percent of rural lecturers considered that the access of early school leavers had become more difficult. However, in all cases and particularly for Aboriginal students, the great majority of lecturers either did not know, or thought access was much the same. It may be too early for the effects of increased retention rates on these groups to have become clear.

The pattern of responses for the performance of the same sub-groups is very similar, although few lecturers (17%) thought that the performance of early school leavers in the course had been adversely affected by the increased numbers of their fellow students with Year 12. However, this may be because those selected tend to be highly motivated and willing to work very hard to compete with the Year 12 persisters.

The survey of curriculum experts indicated that a general rise in the standards of TAFE courses can be anticipated and students will, increasingly, be treated as independent learners. However, teachers are clearly aware of the need to provide special support to those who need it.

It is clear, as Chapters 4 and 7 indicate, that increased retention rates and rising academic expectations in the general population will not assist disadvantaged students, and therefore special measures will be required, such as the pooling of all educational resources and co-ordination by all educational providers in rural communities, and the provision of bridging courses and other special support as needed by individual students. The provision for special needs students is currently at a low level and needs to be enhanced across the full 15-19 age range.

Educational opportunities should be coherent and offer a range of different opportunities to ensure they meet the educational needs of as many young people as possible. To do so, it is important to offer flexible patterns of attendance, (such as part-time), different modes of study and a variety of locations. This would particularly assist in increasing the access and participation of Aboriginal and Torres Strait Islander students.

Without such deliberate effort a general increase in retention to Year 12 may widen the gulf between disadvantaged groups and the majority of their classmates.

Advantages of increased retention

Increased school retention to Year 12 has had a positive impact on teaching methodology, bringing important changes. Increased retention has occurred at a time when TAFE is particularly concerned with issues such as competency-based training, self-paced learning and independent learning. All of these can be more readily included in curricula for students who have had a longer education and both the curriculum experts and teachers indicated (Table 7.4) that such changes are indeed being made, and will increase as retention rates rise.

The questionnaire results are consistent with the developments in the States and Territories where, nationally, steps are being taken to provide credit towards TAFE awards for appropriate study undertaken at school, and the accreditation of suitable TAFE studies towards senior secondary schools' certificates.

Senior secondary/TAFE linked courses increase the range of curriculum options, allowing senior secondary students the opportunity to explore their vocational interests and broaden their education, while keeping open their educational options. These courses help TAFE to become better understood by school students, teachers and parents so that the range of its offerings, and its appropriateness for a wide range of people, can be appreciated.

Compared with economically more successful countries overseas, Australia has had a low rate of retention in senior secondary schools. For Australia to become a 'clever country' which can compete in economic terms we need a better educated workforce. This situation is improving as more students persist to Year 12.

A clear message is coming from many directions - government, industry and educators: the skilled workforce Australia requires for economic growth needs the foundation of a broad initial education and transferable skills. This is essential preparation for the wide variety of work situations workers are likely to encounter. It also provides workers with a basis for more specific education and training throughout their careers in response to continuously changing industry and community needs.

This means that the traditional concept of education compartmentalised neatly (primary, secondary, tertiary) at different life stages, must give way to a new concept of education as a continuum of lifelong learning. Thus, there need be no rigid division between school and TAFE studies; instead, movement between them would occur as appropriate and some courses would carry credit in both sectors.

Sweet (1988) points out that increasing educational participation does not alone lead to increases in the level, quality or appropriateness of the skills of the workforce. Improved teaching is a more significant way of ensuring that TAFE is able to provide school leavers with the skills required by Australia in the 1990s. Joint staff development programs for school and TAFE staff, senior staff and also teachers/lecturers in relation to TAFE/schools programs at regional and local levels is one way of providing this.

Implications and issues for TAFE

Currently in Australia increased retention rates and TAFE's response to their phenomena are in transition. While retention to Year 12 has increased steadily, with a consequent change in the entrants to TAFE entry courses, there is a lag in the response of TAFE in some areas. Consequently many courses conducted within TAFE will include some students who have completed Year 12 and others who have left at Year 10.

This project strongly demonstrates the need for TAFE initial entry courses to make provision to determine school leavers' prior experience, value it, and build on it, particularly in terms of:

- continuity;
- coherence;
- progression;
- relevance.

TAFE institutions should endeavour to provide a flexible response to demographic and market trends such as increased retention to Year 12. This will require changes to:

- course structures;
- TAFE marketing strategies, including equal opportunities;
- TAFE teacher induction, preparatory and continuing professional development courses.

Given current economic constraints it is important that optimal use be made of existing resources, both physical and human, particularly in rural areas. As more, as well as a wider cross-section of students persist to Year 12 there will be an accelerating demand for vocational courses to be undertaken during secondary education. Consultative planning between schools and TAFE in the design, management and placement of new facilities, including staffing patterns, would facilitate the flexible use of resources and ensure the most appropriate provision is made for specific locations such as small rural communities.

The present fee structure for co-operative programs is a barrier to access for students from both government and non-government schools in those States/Territories such as Queensland where TAFE colleges are not specifically funded to offer these programs, and schools are not funded on a permanent basis for the recurrent costs.

There is increasing pressure on TAFE to be more responsive to its clients. TAFE institutions should adapt, modify and where necessary change existing teaching styles to respond to the needs and expectations of students. A TAFE system which is aware of changes in school curricula can adapt its own curricula accordingly. Older students respond positively to curricula which is more varied and more student-centred. The new student group of Year 12 graduates is likely to benefit from TAFE courses which place more emphasis on inquiry-based and activity learning, negotiated and goal-based learning, and learning which has a more practical orientation and closer links with real life experiences. These are all features of teaching designed for adult learners and are appropriate methodologies for most TAFE courses.

Schools/TAFE linked courses

Collaboration and sharing of resources will help both schools and TAFE to expand their offerings, maximise their resources, learn about each other and so both facilitate students' transition and provide a better service.

When accredited TAFE programs are provided in schools, students should be able to gain maximum credit and recognition in further study, or in other structured training arrangements. Achieving this will require significant effort to co-ordinate courses. Appropriate credentials which acknowledge the student's relevant achievements are key factors in this, as is the development and documentation of extensive credit transfer and articulation arrangements.

The new certification framework would require relatively simple documentation method, one that is cost-effective and capable of responding to new developments in education and training. It should be as concise as possible with the record of achievement organised to allow flexibility in up-dating over a number of years. To cope with the scale and complexity of such a certificate, a sophisticated database would be required capable of accommodating all qualifications held by an individual.

The introduction of national broad-based training modules at both school and TAFE levels is likely to improve articulation for the expanded school population. It is important that in such planning, ways are found to ensure that girls' access to apprenticeship programs is fostered, breaking down stereotyped attitudes towards women's participation in technical and vocational education. A major feature of linked schools/TAFE programs is that girls are encouraged to take technical/vocational subjects within a general education framework.

Well co-ordinated links between TAFE and schools will lead to increased community knowledge about TAFE, and credibility of its courses among high school staff, students, and parents. TAFE, in fact, enrols more school leavers than does higher education but has not received parity of esteem. A better understanding of TAFE will enable it to be recognised as a worthwhile aspiration for school leavers. This is likely to have positive effects on the subject choices made by girls in Year 10 which will have far reaching implications for their future education and employment options.

Special students, with particular needs, such as Aboriginal students, non-English speaking background students and those living in rural and isolated areas would benefit from carefully planned extended provision.

Effective educational and career guidance and counselling in which TAFE is recognised as a key and valuable provider of tertiary education is crucial in schools. This will enable students to maximise their opportunities. Policies and strategies concerning counselling are needed.

Expanded joint curriculum development would enhance the opportunities students have for articulation and promote quality education by drawing on the differing expertise of the two sectors.

Kinsman (1990) argues that TAFE/school links should be generic, and not be restricted to specially designated secondary courses or a specific secondary stream. She considers that all secondary/TAFE courses in related fields of study should be linked.

It is important that all students are given opportunities to develop the essential learning necessary to participate in Australian society. This includes literacy, numeracy, problem-solving ability, critical thinking, social and ethical awareness, technological literacy, workplace awareness and the development of learning strategies.

It is vital that co-operative initiatives are resourced adequately. If senior secondary school students are to be offered the opportunity to study TAFE programs, whether in TAFE colleges or in non-TAFE settings, a number of resource implications need to be addressed. These include:

- the fee structure for co-operative programs in TAFE colleges;
- quality management costs;
- development of counselling services;
- increased physical and equipment requirements in schools;
- increased teacher numbers to cater for smaller practical classes;
- professional development of both school and TAFE teachers; and
- provision for special needs students.

Many schools do not have the necessary physical and equipment resources or specialised staff to respond to demands for vocational courses. Not all schools will be able to offer a full range of programs. Therefore, joint schools/TAFE provision and co-operation are necessary.

Monitoring the quality of programs offered by schools, particularly in the establishment stages, may create a heavy drain on TAFE resources. Efforts by some colleges to recover these costs through fees has caused concern and could impair the development of further school-based programs.

Across Australia there is a general lack of well developed and formalised structures for dialogue between schools and TAFE. Such arrangements would make it possible to formalise structures for link programs in order to remove much of the need for negotiated arrangements at the local level. This would streamline an unwieldy and time-consuming process and would also minimise the possibility of problems arising between the two sectors.

The government can support the implementation of school/TAFE linked courses by:

- fostering a co-operative attitude between the key parties involved;
- developing a flexible approach to the implementation of strategies;
- establishing an advisory and resource centre on post-compulsory studies;
- recognising that additional costs are inevitably involved and assisting by providing adequate finance to ensure that initiatives are properly established;

- fostering independent research and evaluation to ensure that initiatives are being implemented in the best possible way and to monitor the benefits claimed for them.

Conclusion

Strategies are needed to promote the importance of education and training to the community (and especially industry) if a learning culture is to be developed. This will include improvements in the counselling and career information provided in schools thereby ensuring that students are well informed about, and encouraged to consider, TAFE courses.

Increased joint curriculum development should to be fostered nationally. Consultative planning in the design and placement of new facilities and staffing patterns would enable flexible use of facilities and ensure that the most appropriate provision is made for specific locations. It is important that extensive credit transfer and articulation arrangements be developed and documented. However, it appears to be too early to raise the academic standards of existing TAFE courses in response to increased school retention rates.

The percentage of those who have completed Year 12 before entering apprenticeships is increasing only slowly. While more apprentices leave school at ages 17 to 19 than previously, this is not true in all trade areas. In 1990 a significant number entered after leaving school at 15 years of age, particularly in the vehicle, food and hairdressing trades.

Clearly any modifications to TAFE curricula should not create barriers for such people. This indicates that increased flexibility, possibly through modularised, self-paced units which permit extension work, and competency-based assessment rather than time-serving, are vital aspects of curricula designed for TAFE entry courses.

TAFE is in the process restructuring to rationalise the structure, content and delivery of its courses. Catering appropriately for school leavers, and indeed for all students, requires TAFE to be responsive to their individual differences in ability and experience, and to adjust existing arrangements to achieve a clear, coherent and equitable curriculum framework within which:

- duplication and discrepancies in provision and imbalances between groups in participation rates are reduced;
- all students are provided with the knowledge, skills and attitudes they need to implement decisions about study options in both school and TAFE;
- programs provide a sound basis for subsequent employment and full social and cultural participation in a rapidly changing Australian society;
- a certification framework outlines the broad learning

pathways available, offering different educational sectors, different programs, different delivery methods and different time periods, in order to take account of the different goals of individual students.

Having completed Year 12 does not alone ensure that students have advanced academic and study skills. The results of this research project demonstrate that wide variation exists in the skills of Year 12 persisters, some of whom may have lower skill levels, and be less motivated, than other students who have only completed Year 10. This means that changes to curricula as a result of increased school retention rates must be made cautiously, and the need for bridging courses and/or other support as required will not necessarily be limited to early school leavers.

It is important to remember that the TAFE and school systems have different charters and serve different stakeholders despite having some overlap of students. Schools are committed to providing a general education whereas TAFE provides vocational education which prepares students for entering the workforce. Considerably less than 10% of the TAFE population consists of immediate school leavers and those from joint TAFE/schools programs are an even smaller percentage. Therefore, while it is important for TAFE to respond to the needs of school leavers this response must be balanced by the needs of other client groups.

Overseas experiences, and Australian studies (such as the Joint School/TAFE Ministerial Post-Compulsory Taskforce) indicate that there is likely to be a significant expansion of TAFE courses with a prerequisite of Year 12, and increasingly TAFE will become a post Year 12 provider, both of which indicate that the minimum age at which young people leave structured education and training should be increased to at least 18. This would provide Australia, like Germany, with a skilled workforce.

Within education departments developments are taking place to provide a more appropriate environment for young adults in senior secondary school. In addition some schools are teaching TAFE courses and, where appropriate, sharing facilities with TAFE. This means that schools are increasingly able to meet the educational needs of 15 to 17 year olds, freeing TAFE to concentrate on the post-Year 12 cohort, except where apprenticeships are restricted to a younger age group.

In particular, it is important to recognise that young people whether in the senior secondary school or TAFE initial entry programs, are not children but young adults, and to develop curricula which builds upon the interests, energies and aspirations of this age group.

In these ways TAFE will be able to take advantage of the increasing rate of retention to Year 12 to incorporate new approaches to learning and extend the options available to young people preparing to join the workforce.

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APPENDIX I : A COMPARISON OF THE CONTENTS OF TAFE AND SCHOOL BUSINESS STUDIES COURSES

A comparison was made between the content of ACT Institute of TAFE courses in business studies which are mainly filled by school leavers, and two ACT Year 12 school courses in business studies. The TAFE courses were the Certificate in Office Procedures Traineeship and Certificate in Keyboarding and Office Skills (KOS). The school courses were Copeland Senior Secondary College, Year 12 Information Management course and Lake Ginninderra College Year 12 Mathematics 3:1. The areas compared were workplace skills, keyboarding, mathematics and English.

WORKPLACE SKILLS

CERTIFICATE IN OFFICE PROCEDURES TRAINEESHIP

SUBJECT TITLE:
Work environment

INSTRUCTIONAL HOURS: 72

Public and private organisational structures and roles in industry
Rights and responsibilities of employers and employees
Roles and functions of trade unions
Interpret salary advice slip and income tax return form
Payroll
Anti-discrimination and equal opportunity issues
Occupational health and safety
Personal effectiveness
Self image
Time management
Attitudes and values
Career development

CERTIFICATE IN KEYBOARDING & OFFICE SKILLS

SUBJECT TITLE:
Workplace skills

INSTRUCTIONAL HOURS: 18

Introduction to interpersonal perception
Co-operation and team effort
Self-awareness/self-esteem
Assertion skills
Stress management
Job seeking skills
Attitudes and values
Occupational health and safety
Personal hygiene

COPELAND COLLEGE - INFORMATION MANAGEMENT

SUBJECT TITLE:
Information management 7/8

INSTRUCTIONAL HOURS: 66

Students completing Unit 7 will be able to:
Write resumes and job applications
Effectively present at an interview
Develop strategies to maintain motivation in the face of setbacks encountered in seeking employment
Integrate the computer packages learned to simulate the application of computers in business
Demonstrate work habits appropriate to working in an office
Key accurately at increasing speed
Students completing Unit 7/8 will be able to:
Describe the role of unions
Describe the importance of workplace issues such as EEO, worker's compensation, sexual harassment
Perform some basic clerical functions including getting petty cash, checking invoices and accounts
Understand the function of business documents such as invoices, credit notes order forms
Key for five minutes at a goal speed of 35 wpm at an accuracy of 98% or better

The Traineeship Certificate and KOS Certificate were almost identical in the topics allocated for the subject; however, the Traineeship Certificate was much longer (by 54 hours).

Copeland College - Information management encompassed topics from both TAFE certificate courses but also added computer application in business and speed development of the keyboard.

KEYBOARDING

CERTIFICATE IN OFFICE PROCEDURES TRAINEESHIP

SUBJECT TITLE:
Information technology I

9 weeks x 4 hrs p/w = 36 hrs

Ergonomics
Keyboard mastery
Proofreading

Production keyboarding

18 weeks x 2 hrs p/w = 36 hrs

Keyboard mastery
Formatting
Word processing packages

Each student has the use of an IBM compatible computer

CERTIFICATE IN KEYBOARDING AND OFFICE SKILLS

SUBJECT TITLE:
Keyboarding

18 weeks x 10 hrs p/w = 180 hrs

Occupational health and safety

Core modules

Basic keyboarding
Correspondence
General formal skills
Accuracy and speed development
Advanced format skills
Reports and meetings
Advanced correspondence
Audio typing
Legal typing
Public service typing
Introduction to word processing

Students must complete the first four modules plus two electives to complete the Certificate.

All students are using electronic typewriters

COPELAND COLLEGE - INFORMATION MANAGEMENT

SUBJECT TITLE:
Information management 1/2

66 hrs of timetabled class time

Describe health and safety practices appropriate to keyboard use

Use correct touch-typing technique

Key for five minutes at a goal speed of 20 wpm with an accuracy of 98% or better

Effectively use a microcomputer operating system and maintain computer floppy-disk files including backup files

Operate a professional word processing package

Compose simple business correspondence

Satisfactorily display a business letter

Proofread and correct with skill

Demonstrate work habits appropriate to working in an office

Recognise and interpret standard manuscript signs

Each student has the use of a computer

The KOS course content involved much more detailed application of specialised typing skills on electronic typewriters, e.g. legal and audio typing. It was also essential to submit many more tasks than the Traineeship Certificate, hence the larger number of instructional hours.

Copeland College's Information management 1/2 unit had very similar content to the Information technology and Production keyboarding components of the Traineeship Certificate. The minimum typing speed goal of each course was 20 wpm. All students were using microcomputers.

MATHEMATICS

CERTIFICATE IN OFFICE PROCEDURES TRAINEESHIP

SUBJECT TITLE:
Office procedures A

Topic name: Calculations

Calculate (add, subtract, multiply and divide) figures quickly and accurately with and without a machine

Identify the functions and uses of different types of calculate-machines

Calculate simple and compound interest, percentages, balance columns of figures, locate errors in calculations in simulated officer exercises using a calculator or an adding machine

Use the memory function of a calculator when appropriate

Total instructional hours for subject: 27 hours

CERTIFICATE IN KEYBOARDING AND OFFICE SKILLS

SUBJECT TITLE:
Office procedures A

Topic name: Arithmetic for clerical duties

Add, subtract, multiply and divide figures quickly and accurately with and without the aid of a calculator

Use correct fingering to operate a calculator or adding machine

Calculate percentage figures accurately

Use memory function of a calculator when appropriate

Total instructional hours for subject: 72

LAKE GINNINDERRA COLLEGE - MATHEMATICS 3:1

SUBJECT TITLE:
Mathematics 3:1

Topic name: Mathematics 3:1

Be competent at a range of standard arithmetic computations on a scientific calculator and have developed the skills necessary to check answers

Have increased their ability to solve some standard problem types involving an understanding of percentages and be able to clearly present their reasoning and solutions

Have a basic understanding of commonly used metric units of measurement of length, area, mass and volume

Be able to select appropriate metric units with which to estimate size and be able to use a range of common measuring devices

Be able to use formulae to provide answers to a range of written problems

Instructional hours:

Calculators: 8 hrs
Percentages: 8 hrs
Scientific Notation: 4 hrs

Both TAFE courses offered mathematical components in their Office procedures subject whilst Lake Ginninderra College offered an intensive mathematics subject devoid of office application. Lake Ginninderra College also incorporated metric units of measurement and problem solving formulae which were not in the TAFE courses.

ENGLISH

CERTIFICATE IN OFFICE PROCEDURES
TRAINEESHIP

SUBJECT TITLE: (54 hrs)
Communication in the workplace

Topic names:
Oral communication
Carry out and deliver oral instructions or information to communicate effectively with colleagues and members of the public

Written communication
Independently write simple office correspondence such as:
- file notes
- memorandum
- letters

using appropriate format, correct punctuation, spelling and grammar
PROOFREAD and EDIT all draft material

Comprehension and interpretation
Read business materials such as:
- memorandum
- letters
- reports

quickly and with comprehension
Locate information in reference resources such as dictionaries
Outline library cataloguing

Job seeking
Read job advertisements, locating essential information
Compile personal resume
List supporting documentation required for job interviews
Write simple solicited and unsolicited job application

CERTIFICATE IN KEYBOARDING AND OFFICE SKILLS

36 hrs
Business english A

Topic names:
Basic literacy
Punctuation
Sentence correction
Library skills
Proofreading
Comprehension
Written business communication

COPELAND COLLEGE - ACCREDITED COURSE
ENGLISH A

English A

Number of modules: 12

Composition of Course: Students may do either a major/minor, a major or a minor in English A

A major/minor would require completion of at least 11 modules, a major at least 7 modules and a minor at least 4 modules

Module titles
1 Language and literature 1
2 Language and literature 2
3 Language and literature 3
4 Language and literature 4
5 Radio and television
6 An introduction to drama
7 Finding an Australian identity
8 Science fiction
9 Responses to war
10 Career English
11 Heroes and heroines
12 Introductory film study

Aims
To develop students' sense of self-worth and achievement through development of language confidence
To enable students to become confident users of language for their own purposes
To enable students, through discussion, literature and the media to gain a critical understanding of the world around them
To encourage students to observe, listen, speak, think and write with skill
To encourage self-expression and creativity
To help students develop skills in gathering information relevant to them and their interests
To encourage students to assess their own work and progress and make adjustments which increase their control over learning

There was a disparity between the course offered by Copeland College and the KOS and Traineeship courses. Copeland College's course was dominated by language and literature understanding whilst the TAFE courses related specifically to office and business communication.

APPENDIX II : QUESTIONNAIRE FOR TAFE CURRICULUM OFFICERS

Three copies of this questionnaire were sent to each TAFE agency with the request that they be completed by the most senior officers in that agency with responsibility for each of the programs of:

Business Studies
Electrical Engineering
Hospitality

Nineteen responses were received, all States and Territories were represented and all three areas. These responses are analysed in Chapter 7.

THE EFFECTS UPON TAFE CURRICULA OF INCREASED RETENTION IN SENIOR SCHOOLS

Questionnaire for Curriculum Officers HP67

This project is looking at how TAFE can best respond to a changing student group as more of its students have an extended secondary school background. Your contribution in answering this anonymous questionnaire will help TAFE provide a better service to us students.

The project focuses upon three programs - Business Studies, Electrical Engineering and Hospitality in program areas up to stream 3300 level.

1. Program discussed.
(please tick the area to which your information refers. If you are able to provide information about more than one program please photocopy this questionnaire and do each separately)

Business Studies .... ☐ 1
Electrical Engineering.. ☐ 2
Hospitality .... ☐ 3

2. State your state or territory:
(please place the appropriate number in the box)

NSW 1
VIC 2
Q'LAND 3
W.A. 4
S.A. 5
TAS 6
N.T. 7
A.C.T. 8

☐ 1 TO 8

3. What, if any, changes have been made to TAFE curricula as a result of the increased retention levels in senior secondary schools?:

....

....

....

....

....

4. What, if any, curricula changes do you anticipate will be made in your program over the next five years given the anticipated greatly increased senior secondary school retention rates?:

....

....

....

....

....

5. Is some form of credit given for study to years 11 and 12 in any of your courses?

Yes .... ☐ 1

No .... ☐ 2

6. If so, on what basis is such credit given?
(please tick whichever apply)

possession of school certificate .... ☐ 1

possession of tertiary entrance certificate .... ☐ 2

competency test .... ☐ 3

other .... ☐ 4

If you are aware of any courses which have been adapted particularly successfully in response to the increased school retention rates, could you please fill in these details:

Name of Course: ....

College Address: ....

Contact Person: ....

Brief Description: ....

....

....

....

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

Please return it as soon as possible, in the reply paid envelope or directly to:

Pauline Mageean
Research and Development Officer
TAFE National Centre for Research and Development
252 Kensington Road
LEABROOK SA 5068

APPENDIX III : QUESTIONNAIRE FOR TAFE SENIOR LECTURING STAFF

All TAFE colleges were sent copies of the following questionnaire for TAFE senior lecturing staff in:

Business Studies
Electrical Engineering
Hospitality

A total of 252 responses was received, from all States and Territories and representing all three areas. These responses are analysed in Chapter 7.

THE EFFECTS UPON TAFE CURRICULA OF INCREASED RETENTION IN SENIOR SCHOOLS

Questionnaire for Senior Lecturing Staff

HP67

This project is looking at how TAFE can best respond to a changing student group as more of its students have an extended secondary school background. Your contribution in answering this anonymous questionnaire will help us to provide a better service to our students.

The project is focusing upon three programs - Business Studies, Electrical Engineering and Hospitality in courses up to stream 3300 level.

1. Program discussed -

   (please tick the area to which your information refers)

   Business Studies .... ☐ 1

   Electrical Engineering .... ☐ 2

   Hospitality .... ☐ 3

2. Courses(s) to which you are referring

   (Please list) *Course stream*

   ....

   ....

   ....

3. Your position ....

4. State/Territory
   (please place the appropriate number in the box)

NSW	1
VIC	2
Q'LAND	3
W.A.	4
S.A.	5
TAS	6
N.T.	7
A.C.T.	8

☐ 1 TO 8

5. This college is :
   (please tick appropriate box)

   urban * .... ☐ 1

   rural .... ☐ 2

* urban is defined as within the metropolitan areas of the capital cities and of Geelong, Gold Coast, Newcastle and Wollongong.

6. **Compared with 5 years ago, has there been a change in the proportion of your students who have completed year 12?**
(please tick one box)

Yes .... ☐ 1

No .... ☐ 2

7. **If yes, please estimate the percentages of year 12 completers this year and five years ago.**
(please complete the two boxes)

	Estimate of % of yr 12 completers	
1986	%	1
1991	%	2

8. **How do those students who have remained at school longer compare with other students in the same class?**
(Please tick the appropriate boxes)

	more advanced	the same	less advanced	not applicable
In Mathematics	☐ 1	☐ 2	☐ 3	☐ 4
In Physics	☐ 1	☐ 2	☐ 3	☐ 4
In English/Communication	☐ 1	☐ 2	☐ 3	☐ 4
In study skills	☐ 1	☐ 2	☐ 3	☐ 4
Motivation	☐ 1	☐ 2	☐ 3	☐ 4
In general maturity	☐ 1	☐ 2	☐ 3	☐ 4
In clearer career goals	☐ 1	☐ 2	☐ 3	☐ 4
In other relevant areas	☐ 1	☐ 2	☐ 3	☐ 4

(Please specify ....)

9. **Do you consider that the longer period at school has had the effect of alienating some of your students, making them less willing to learn?**
(please tick one box)

Yes .... ☐ 1

No .... ☐ 2

10. Have any modifications been made to the program as a result of retention to year 12? *(please tick one box)*

Yes .... ☐ 1

No .... ☐ 2

If so, please describe these:

....

....

....

....

....

....

....

....

11. Have any changes been made in the overall teaching methodology in response to student's longer schooling?
(Please tick whichever boxes apply)

it is more self-paced .... ☐ 1

there is more emphasis on the student as an independent learner .... ☐ 2

it is at a higher literacy level .... ☐ 3

more emphasis on students conducting their own research .... ☐ 4

other (please specify) .... ☐ 5

12. Have you found it necessary to provide special support to those students who have not completed year 12?
(please tick one box)

Yes .... ☐ 1

No .... ☐ 2

13. What effect have greater retention rates had on the entry requirements for courses in your area?
(tick one box only)

No change .... ☐ 1

No change in official criteria but in practice higher educational levels are preferred in selection .... ☐ 2

Change in official criteria - higher levels required .... ☐ 3

14. Given predicted increased school retention rates, do you consider that it would be appropriate to make changes to existing curricula?
(please tick one box)

Yes .... ☐ 1

No .... ☐ 2

If 'No' why do you think this: ....

....

If 'Yes' would these changes be:

a) in content

Yes .... ☐ 1

No .... ☐ 2

Please give details ....

....

b) in teaching methodology

Yes .... ☐ 1

No .... ☐ 2

Please give details ....

....

c) other

Yes .... ☐ 1

No .... ☐ 2

Please give details ....

....

15. As more students complete senior secondary school how should TAFE respond to those students who leave before year 11?

Provide bridging courses before they begin at TAFE

Yes .... ☐ 1

No .... ☐ 2

Provide extra support during the course as required

Yes .... ☐ 1

No .... ☐ 2

Entry requirements should be raised to exclude these students

Yes .... ☐ 1

No .... ☐ 2

They should be accepted without any special provision

Yes .... ☐ 1

No .... ☐ 2

Other

Yes .... ☐ 1

No .... ☐ 2

(Please give details) ....

....

....

16. Have increased school retention rates had any effect upon the access and/or performance of students from any of the following groups?
(Please tick those affected)

	ACCESS				PERFORMANCE			
	Better	Same	Worse	Do not Know	Better	Same	Worse	Do not Know
Aboriginal students	☐ 1	☐ 2	☐ 3	☐ 4	☐ 1	☐ 2	☐ 3	☐ 4
Non-English speaking background students	☐ 1	☐ 2	☐ 3	☐ 4	☐ 1	☐ 2	☐ 3	☐ 4
Girls in non-traditional areas	☐ 1	☐ 2	☐ 3	☐ 4	☐ 1	☐ 2	☐ 3	☐ 4
Rural students	☐ 1	☐ 2	☐ 3	☐ 4	☐ 1	☐ 2	☐ 3	☐ 4
Early school leavers	☐ 1	☐ 2	☐ 3	☐ 4	☐ 1	☐ 2	☐ 3	☐ 4

Comment ....

17. If you are aware of any courses which have been adapted particularly successfully to the increased school retention rates, could you please fill in these details.

Name of course ....

College ....

Contact person ....

Briefdescription..

....

....

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

Please return it in the pre-paid envelope as soon as possible, or post it to

Pauline Mageean
Research and Development Officer
TAFE National Centre for Research and Development
252 Kensington Road
LEABROOK SA 5068

WP5/G:
HP67QEST-15/3/91

APPENDIX IV : SCHOOLS/TAFE LINKED COURSES, WHAT IS OCCURRING ACROSS THE STATES/TERRITORIES

The following information, about schools/TAFE linked courses, is correct as at the end of May 1991. However, this is an area in which changes are occuring rapidly, and the reader is advised to consult with the individual TAFE agencies to learn of new developments.

Developments in TAFE/schools linked courses in the different TAFE agencies are:

In NSW the Joint Secondary Schools/TAFE program (JSST) which offers Year 11 and Year 12 students courses not otherwise available at school has been running in government schools and TAFE colleges since 1985. Generally, joint courses are either major TAFE award courses or are composed of established TAFE subjects drawn from major TAFE award courses. The subjects studied are usually at the TAFE certificate, advanced certificate or statement of attainment level in business, agriculture, the hospitality industry, electronics, mechanics, computing and a range of trade courses. They are taught by TAFE teachers and are usually in, and use, the facilities of TAFE colleges.

This strategy overcomes the problem that schools are often less well resourced than TAFE to teach vocational subjects both in terms of the experience of the teachers (particularly in the workplace) and in physical equipment (particularly state-of-the-art equipment).

These courses are either determined or approved by the NSW Board of Secondary Education and so are part of the schools' curriculum. In 1991, 690 joint courses were funded involving some 10,400 students. They lead to the Joint Secondary Schools TAFE Certificate.

While the official entrance requirement for advanced certificate courses is Year 10, in effect, for some high demand courses, Year 12 has become a de facto entrance requirement and Year 10 leavers are excluded.

This, however, does not apply to apprenticeships which must be available to Year 10 leavers. Again, however, in many instances employers themselves are selecting Year 12 graduates, often irrespective of the relevance of the subjects taken.

Board-developed joint courses are accepted by universities as matriculation status subjects. The marks obtained in these courses may be used in the calculation of the Tertiary Entrance Rank.

Joint secondary schools/TAFE courses in this category are:

- Accounts-Clerical;
- Electronics Technology;
- Small Business Practice;
- Travel Agency Practice.

There is dual accreditation for these courses.

All joint secondary schools/TAFE courses other than the Board-developed courses are Board-endorsed courses. The Board-endorsed courses can contribute to the 11 units of study required for the HSC, but the marks obtained in them do not contribute to the Tertiary Entrance Rank.

Content-endorsed courses are Board-endorsed courses developed in subject areas of high demand for which there are not Board-developed courses. They are:

- Automotive Studies;
- Child Studies;
- Office Studies.

Courses in the Other Endorsed Studies category are available to students in Years 11 and 12, and give advanced standing in a number of TAFE certificates.

Advanced standing arrangements between the Higher School Certificate and TAFE are part of the broad range of articulation arrangements which have been or are being negotiated between TAFE and other sectors including higher education, industry and private providers.

Advanced standing in TAFE may be available in certain circumstances for students who have studied HSC subjects which are not part of the JSST program.

Formal arrangements for the automatic granting of advanced standing between the HSC and TAFE are currently being negotiated, and these will be published towards the end of 1991. A number of informal arrangements exist however, whereby students who have successfully completed certain HSC studies are granted credit or exemption in some TAFE courses.

In **Victoria** the schools/TAFE integrated program was introduced in 1988. A detailed study is being made of articulation arrangements as they are being developed currently in Engineering, Electronics, Art and Design, Hospitality and Tourism, and English and Communication Skills. (State Training Board 1990b). This has shown that students can successfully undertake vocationally related programs of study within the new Victorian Certificate of Education (VCE).

Within the VCE, students can gain skills and knowledge which articulate with, or when appropriate are given credit in, TAFE courses. Comparative analysis of the TAFE Certificate in Office and Secretarial Studies (COSS) and VCE business studies, has indicated that it is possible for students to undertake courses in their VCE studies, which provide for outcomes equivalent to those in some but not all the COSS units (State Training Board 1990b).

Because of the occupational context (in the office) of the COSS, articulation arrangements depend upon the VCE student undertaking the VCE within the particular vocational (office) context. This context will not be reported in the VCE Certificate or Statement of Results. Therefore a reporting mechanism will need to be developed. Schools will need to report that the student has satisfactorily completed appropriate work requirements (demonstrated competencies) within the office context.

A more general finding was the relationship between the VCE and the TAFE course in terms of vocational and general education; in particular, the relationship between general vocational education and occupationally-specific training. The similarity, or overlap, of curriculum between the VCE and the COSS was found to be in the transferable, broad-based areas, such as Information Technology and Accounting. Students with Year 12 mathematics and physics/science entering electrical engineering can 'fast track' in the associate diploma course.

Articulation arrangements have been agreed upon for the VCE to TAFE in the Engineering, Electronics, Art and Design, Hospitality and Tourism industries, and in Communications Skills. A communication strategy is now being developed. As part of this strategy information on the arrangements will be disseminated to TAFE colleges and schools. In the longer term, career packages which detail job opportunities, training requirements and include details on the credit transfer arrangements will be developed for students, parents and teachers.

The implementation of the credit transfer arrangements will be monitored and evaluated. In the short term, this will involve liaison between schools and TAFE, and in the longer term, the analysis of the success of students who have taken advantage of credit transfer opportunities. Work completed so far indicates that students can undertake vocationally related programs of study with the new VCE. In doing so students gain skills and knowledge which articulates with/is appropriate, for credit into TAFE courses.

The State Training Board has stated its position on credit transfer clearly:

> TAFE colleges will not compete with schools in offering VCE or similar programs for this age group (senior secondary students).
> (State Training Board 1990b, p.20)

Students who have left school before completing Year 12 can be encouraged to complete the VCE by the provision of credit towards it for appropriate study undertaken within TAFE entry level programs. For example, credit towards the VCE for English units 1 and 2 is given to students who have completed the TAFE Certificate in the Occupational Studies subject of Communications. This articulation arrangement meets the English requirement for the Adult VCE.

In **Western Australia**, since 1980, individual schools and TAFE colleges have responded to the growing numbers of students remaining at school to Years 11 and 12. Co-operative efforts were initiated between TAFE, the Ministry of Education and the Department of Employment and Training in 1988 to develop curriculum strategies to respond to the changing needs of employers, students and parents.

In June 1989, the WA Joint Schools/TAFE Ministerial Post-compulsory Education Taskforce was commissioned to develop an appropriate educational framework for young people aged 16 and 17. TAFE link courses were extended and a new 'Schools/TAFE Accredited Pilot Program' launched.

In link programs Year 11 and 12 students attend TAFE part-time for one or two classes per week over one or two semesters to gain an introduction to TAFE studies. These courses are not accredited by the Secondary Education Authority (SEA). The students are usually enrolled in an Alternative Upper School Program.

Some secondary students study TAFE subjects by correspondence in wool classing and agriculture and the TAFE teacher visits the school as needed.

The West Australian Certificate of Secondary Education (CSE) certifies all senior secondary achievement. Some TAFE subjects are included. These are accredited by TAFE as part of existing certificate and advanced certificate courses and are accredited by the SEA for inclusion in secondary graduation. In 1988, seventeen such subjects were offered; in 1989, the number had grown to 174.

These subjects are not moderated by the SEA nor are they approved for higher education entrance scores. However, one of the six subjects studied in Year 12 need not be accredited in order to gain a 'satisfactory performance' required for higher education entrance. Despite this, the Joint Schools/TAFE Ministerial Taskforce points out these subjects are generally perceived to have a lower status than TES subjects.

Schools which wish to offer TAFE subjects must demonstrate that they have the facilities and equipment needed to run the course and prove that their staff are qualified and competent to teach it. Unless both these criteria can be met the course must be studied at TAFE and taught by TAFE staff. This presents a number of problems for the school:

- the cost of employing TAFE staff and of consumable equipment must be met by the school;
- schools must arrange and fund the transport of students to and from TAFE;
- the school must bear the responsibility for synchronising its timetable with the timetable at the TAFE centre;
- the school may have to accommodate its own timetable arrangements to the TAFE requirement for students to attend for larger units of time than the school provides.

The timetabling compromises thus forced on the school are often difficult to arrange and are needed by only a very small group of students. Browning (1990) points out that solutions to these problems are easy to define but hard to implement. He suggests that:

- funding to meet the cost of TAFE staff and student travel should be made available to schools from sources other than school budgets. In the present climate of tight funding, links which require school students to attend TAFE are difficult to establish;

- where there is a shortfall in resources at the school, the shortfall should be made good (however, he does not indicate from where);

- there should be a greater willingness on the part of TAFE to recognise the competency of school teaching staff even without the benefit of a trade background (however, this would raise concerns about the quality of the course);

- TAFE and schools should be equally flexible in attempting to synchronise their timetables.

TAFE subjects which do not depend upon a specialised infrastructure can be offered more readily in schools. These include business studies, visual arts, computer and language courses.

Business education is the schools/TAFE link area in which there has been most growth. The opportunity to gain both a recognised TAFE certificate and the Certificate of Secondary Education is attractive to many school students and the majority of those who undertake this program intend to continue at TAFE.

TAFE subjects are not listed on the Certificate of Secondary Education; the certificate is endorsed with the words: 'x credit points have been granted for TAFE studies'. The only credential received by students who take isolated TAFE subjects is the print-out of examination results issued to all TAFE students.

In **South Australia** there are several joint initiatives being undertaken by the Senior Secondary Assessment Board of SA (SSABSA) and TAFE to provide credit towards both TAFE and school awards for studies done in senior secondary school.

Subjects of the TAFE Certificate in Introductory Vocational Training are being taught in one high school. In designated locations, DETAFE and the Department of Education operate jointly on one site. This gives students access to the resources and study pathways of both TAFE and schools. Examples of such joint operations include the developments currently occurring on the campuses of Thebarton High School and the South East College of TAFE at Millicent.

SA DETAFE Status Assessment Panels determine credit transfer between Year 12 subjects and DETAFE subjects.

In 1989 the Joint Ministerial Statement on Schools-TAFE Co-operation:

- clarified the separate but complementary roles of the Education Department and the Department of Employment and TAFE;

- outlined some ways in which they will jointly and separately provide education and training services for South Australians;

- proposed a framework to enable students to transfer credit from one system to another;

- committed the Departments to joint curriculum development, and to co-operation with the other education and training providers in facilitating the transfer of credit.

For 1991 credit transfer has been arranged for 32 Year 12 subjects in 31 DETAFE award courses (21 certificates, 5 advanced certificates and 5 associate diplomas). Currently further work is being undertaken to provide two-way credit transfer which will provide credit for certain TAFE subjects towards tertiary entrance scores.

The new South Australian Certificate of Education (SACE) will be introduced in 1992. The SACE will be the certificate for all senior secondary school leavers. It is to be awarded after studies at two levels - Stage 1 and Stage 2 (Years 11 and 12). A primary aim of the SACE is to provide a general education for all students. The nature and place of 'vocationally relevant studies', 'work-related studies', 'skill acquisition', 'work experience' etc. in the SACE should be seen in this context. The integration of 'work-related studies', the development of 'generic vocational skills', and the reflection of both practical and theoretical approaches to learning are objectives of studies within the SACE.

It is important that current cross-status articulation arrangements between schools and TAFE are extended so that students can complete the SACE in alternative ways. Some students, for example, would want to count approved studies from the DETAFE towards the SACE. A Cross-Status Committee has been established by the relevant Ministers to formulate policies to facilitate such co-operative arrangements.

Students who successfully complete certain SSABSA-accredited subjects are granted status in some courses offered by DETAFE. Certain conditions apply; usually a minimum Subject Achievement Score is required if status in appropriate TAFE courses is to be granted. This arrangement has been working successfully for about three years.

The topics offered by SSABSA's Technology Studies have been deemed equivalent to subjects in the TAFE Certificates in Rural Mechanical Maintenance and in Farm Practice. Topics for which transfer-of-credit is granted include: Power Technology, Welding and Fabrication, Workshop Practice or Metal Machining, Power Technology, Electricity and Outdoor Construction.

DETAFE studies have not yet been accredited as units contributing to the SACE. SSABSA is currently writing the broad-field frameworks that will define the post-compulsory curriculum. Schools will be able to write programs based on the large range of 'extended subject frameworks' that SSABSA is providing. It is intended that the Education Department and the DETAFE will collaborate in a computerised data base of job and course information.

SA DETAFE and the SA Department of Education are undertaking a number of innovatory projects relevant to the articulation of senior secondary school subjects with TAFE. Study pathways projects involve a team from TAFE and schools examining the curricula to determine which school subjects would be most useful for students wishing to enter industry and/or TAFE. The areas so far considered are tourism, engineering and hospitality.

An Education Department initiative which is relevant to this report is the development of 'Focus' schools. These schools will specialise in certain subjects. Focus schools allow expensive equipment and specialised staff to be concentrated so that students with a particular interest may attend the school to pursue it. Schools focussing on technology studies will prepare their students for some TAFE engineering courses. Credit arrangements are being considered.

In **Queensland** co-operative programs currently operate in TAFE colleges, high schools, and industry and through distance education programs. For reasons of geography, continuity and finance, TAFE programs taught in schools are increasing rapidly. A number of TAFE awards are available to senior secondary students who complete certain combinations of vocational subjects.

Students may seek either subject exemptions or advanced standing in other TAFE programs, depending on the particular subject or combinations of subjects successfully undertaken. Success in subjects of a vocational course may be used as credit transfer apprenticeship and/or exempt the apprentice from part of the course.

Joint curriculum development has begun in a small number of subjects, e.g. marketing. In 1991 an inter-departmental committee representing the Bureau of Employment, Vocational and Further Education & Training (BEVFET) and the

Department of Education was established to develop a strategic plan for Foundation Education. In consideration of the need to increase educational opportunity and learner flexibility two reports identifying curriculum principles and frameworks have been submitted for approval to the inter-departmental Committee.

Current cooperative arrangements allowing senior students to study subjects/courses in TAFE colleges in conjunction with their senior school studies are being examined to identify ways of more formally addressing the need for TAFE/senior schooling interface.

The recently developed broad based metals modules are being trialled in selected high schools in 1991. The increased emphasis on a competency-based curricula will have a major impact in the year ahead on developing greater flexibility and more diverse skills for the 15-19 year old student.

TAFE has established shared facilities in a few high school premises. However, there is limited TAFE provision for special school students. This provision does not address the needs of those who have disabilities but have been integrated into mainstream schools.

These activities provide the foundation for further co-operative developments. However, the Department of Education and BEVFET (1990) warned that without further funding to cover the costs of operating these courses, the heavy demand for such courses will be hard to meet.

In **Tasmania** the formal arrangements between schools and TAFE have not yet adapted to the effects of longer retention in schools. This is, in part, because the senior secondary curriculum and accompanying certification are changing.

The new Tasmanian Certificate of Education is to be more concerned with outcomes than was the earlier one. This means it will be more competency-based with broad criteria. It will provide credit towards TAFE courses up to associate diploma level in relevant subjects. Tasmania aims to introduce a system level credit transfer and articulation agreement between TAFE and secondary education, rather than having a number of different agreements between individual TAFE colleges and secondary colleges.

In 1990 no formal arrangements existed for giving credit in TAFE for courses completed in senior secondary school. However, plans are underway to provide such credit in relevant subjects.

National modules which have been introduced in TAFE courses may be taught in senior secondary schools as part of the new Tasmanian Certificate of Education. The 1991 Year 10 is the pilot group, so these changes are not yet affecting Years 11 and 12. It is expected that this strategy will be extended to Year 11 in 1992. This arrangement is under discussion as part of the general articulation and credit transfer proposal.

In the **ACT** co-operative programs currently operate in TAFE colleges, high schools, secondary departments, industrial settings and through distance education. TAFE programs taught in schools are increasing rapidly.

Appendix A compares the content of a number of business studies courses taught in schools and the Institute of TAFE and reveals a considerable overlap. These co-operative activities provide the foundation for further co-operative developments.

ACT schools offer E Courses, which focus on particular areas of employment. These were introduced into the senior secondary curriculum in 1989. Consultations are mandatory between TAFE and relevant employer and employee groups during their curricula development. TAFE consideration of possible articulation and advanced standing is one of the specified stages in the development of E courses.

From 1992, students at one ACT high school will be able to study for a TAFE business studies certificate as part of their Year 12 course, and will be eligible for dual certification. The course will be taught at the school by school teachers, with extensive input from the ACT Institute of TAFE on curriculum development and accreditation.

Although the Northern Territory has a high Year 11 and 12 retention rate (approximately 64-65%), enrolments in TAFE have not increased over the past few years. However, Northern Territory TAFE college information is that Year 12 retention rates have significantly altered the student profile. An example is some courses that were traditionally very popular with school leavers (e.g. secretarial studies) are no longer selected by that group. They are now predominantly filled by mature age and/or retraining people. ATS is now frequently catering for the school leavers.

In the Northern Territory, Year 12 graduates receive the South Australian Education Certificate (Northern Territory). This allows for up to seven TAFE units to be counted towards the award, as does the South Australian model.

The Northern Territory Board of Studies has accredited some Northern Territory TAFE units/courses for the SACE (NT) (only a number of the metals modules thus far). Several of these modules are being taught in Northern Territory secondary schools and colleges in 1991. Formal exemption agreements are currently being sought from several TAFE providers. The Board of Studies will continue to identify other TAFE subjects for accreditation in SACE (NT).

Formal credit transfer arrangements for senior secondary subjects into TAFE courses are in place. These arrangements have been negotiated using existing procedures. The current school/TAFE linked courses are:

- Alice Springs College of TAFE teaches secondary students TAFE courses on TAFE premises with TAFE lecturers. These students study traditional core subjects with secondary teachers on TAFE premises.
- The Northern Territory Open College of TAFE teaches a number of TAFE courses to school students on TAFE premises and by TAFE lecturers. It has in the past taught TAFE courses on industry premises with industry and TAFE lecturers although this is not presently occurring.

It is Northern Territory TAFE policy that ensuring the quality and monitoring of courses for school students taught in TAFE remains the responsibility of the individual TAFE college and principal. Where TAFE courses are offered in schools they are accredited by the Northern Territory Board of Studies, and responsibility rests with this Board. There is no system-wide means for TAFE to monitor the standard of its courses taught in schools.

The Northern Territory Board of Studies/TAFE Advisory Council Working Party on Dual Accreditation was established in 1990 with the task of developing procedures for formalised exemption/credit transfer/articulation arrangements between the two sectors.